Index to Volume L

JANUARY TO JUNE

1923

Journal of Electricity and Western Industry

Published by McGraw-Hill Company of California
San Francisco, California

240
2165
D

TK1
.E495

JUL 20 1923

E PH 29/VIII/25

AUTHORS' INDEX

Page

Anderson, S. B. 175
Arbaugh, D. 169
Ardouin, L. R. *20
Baker, Clark 411
Bartlett, John T. 224
Bishop, S. W. 7, *140
Britton, John A. *85
Browne, E. Earl 169, *332, *378, *460, 481, *494
Bullard, J. E. *56, *144, *292
Burrell, W. F. 243
Chatfield, Roy E. 296
Christian, F. W. *65
Cowles, R. R. 488
*Cram, Herbert *403
Criddle, E. B. 416, *448
Cummings, M. L., Jr. *343
Denny, R. C. *435
Doerr, O. R. *283
Doolittle, C. E. 169
Fritz, C. Wilbur 53
Frost, A. M. *420
Gallison, Norman S. *91, *254
Garbutt, H. L. 330
Gosrow, R. C. *16
Greene, Albert E. 168
Harris, D. E. *105
Herington, G. B. 215
Heston, W. C. *9
Howse, Paul D. 407
Isbell, A. A. 243
Jakobsen, B. F. 129
Kelley, C. A. *438
Koontz, J. A. *444
Leurey, Louis F. *18, *58, *142, *180, *218, *256, *294
Martin, C. O. 406
McArthur, Lewis A. *483
McMicken, A. C. 23, 47, 60
Michener, H. *427
Moore, E. J. *433
Moulton, J. H. *433
Nicoll, A. H. *403
Northmore, E. R. 426
Osier, Joe 23, 60, 149, 185, 221, 259, 297, 336, 462, 500
Otterson, John W. *136
Parsons, A. T. 169
Patterson, Ralph J. 481
Penny, Prudence *64
Phillips, Chas. T. 411
Porter, E. Y. *455
Powell, R. C. *442
Prussia, R. S. 409-410
Public Affairs Committee, S.F. Chapter, A.A.E. 6
Quinn, E. A. *288, *370
Rice, H. C. 418
Robinson, L. N. 7
Sandoval, H. E. *420
Sarnoff, David *486
Sievers, F. O. 416
Simpson, Tracy W. 407
Staal, C. P. 432
Stauffacher, E. R. 429
Talbott, W. H. 446
Tenney, George C. *49, *131, *246
Turnbull, Ray W. *171
Wills, G. M. 425
Woodbridge, J. E. 419
Wrenn, J. W. 413
Young, Garnett *207

Index to Volume L

Illustrated articles are designated by an asterisk (*), editorials by a dagger (†).

Page

A

†A Wise Dealer Recognizes the Value of the Installment Plan 278
A.A.E.—
Ogden, Committees Named 227
Public Affairs Committee, S. F.Chapter, Disagrees with Editorial 6
*A.C. Substations, Developments—by R. C. Powell 442
A.I.E.E.—
Annual Convention, Del Monte, October 307
Del Monte, Calif. Committees Appointed 71
Directors' Nominees Announced 267
Harris J. Ryan Named President 466
†Increasing Interest Shown in Engineering Ethics 202
Joint Meeting with N.E.L.A. Held, Portland 231
Los Angeles Chapter Visits Laguna Bell 469
Plans for Meeting, Del Monte 155
Portland, Addressed by Reed College Men 307
Portland Section Midwinter Meet 115
Seattle, Elects Officers 506
†Summer Convention, Swampscott 317
Utah, Visit Substation 507
Am. Soc. M. E.—
Convention, Los Angeles 391
Los Angeles Regional Meeting 307
Pacific Coast Regional Meeting Plans Made 190
Regional Meeting, to be in Los Angeles 269
Accidents—
Bird in Wire Causes Death 128
Accounts, Uniform Classification—by C. P. Staal 432
Accounts, Uniform Classification, Discussion of, Denver 231
†Accounts for Elec. Pub. Utilities, Uniform Classification 126
†Adages Are the Fruits of Knowledge and Long Experience 43
Adams, H. Austin, Speaker, San Diego Elec. Club 230
Additional Service to be Given Workmen at Steel Plant 303
Additions and Corrections Noted in Listing Hydro Plants—by A. T. Parsons 168
*Advanced Application of Elec. Drive in Arizona Copper Mill 180
†Advertise, It Pays to—Trite But True 316
*Advertising, B. C. Ry. Cooperates with Dealers 342
Advertising, Direct-by-Mail, Elec. Jobber's——by John T. Bartlett 224
Advertising, Edison Lamp Works, Described to Utah Men 391
†Advertising, Pub. Util., to What Extent 478
Advertising, Pub. Util., Urged by Denver Man 344
Advertising Campaign, Seattle Municip. Owned Utilities 466
Advertising Effective, California 480
Advertising Field, Electrical, Shown in Recent Survey 185
Advisory Committee of Campaign Makes Plans for 1923 230
Air Heating, Water and—Analysis of Data—by J. W. Wrenn 413
Albany, Ore.—
Application for Water, A. A. White 70
Albuquerque, N. M.—
Convention, N. M. Elec. Assn. 193
*Rapidly Growing Territory 212
Albuquerque Gas & Electric Company—
*Serves Rapidly Growing Territory 212
Alexander, Idaho, City Light Plant Destroyed 192
All-Engineers Meetings Held, Salt Lake City 345
Alleys of Denver Will Be Lighted 341
Altadena, Calif.—
*Street Lighting Interesting 55
American Electrochem. Soc Meeting in Dayton, Ohio 507
†Am. Engineering Stand. Committee—
Plans to Standardize Symbols, etc. 241
To Prepare New Code 191
Year Book Issued 304
American Falls Irrigation District Organized, Snake River 190
*American Metal Prod. Co. Order Blank for Switch Boxes 262
An Elec. Jobber's Direct-by-Mail Advertising—by John T. Bartlett 224
An Association I Know—by Joe Osier 60
Analysis of Data on Cooking, Water and Air Heating—by J. W. Wrenn 413
Analysis of Present Rate Schedules, An—by E. B. Criddle 448
Anchorage, Alaska—
Cities Supplied with Electricity 30
Announcement of Reorganization Made by Majestic Co. 506
*Annual Kiddies' Day is Held by San Francisco League 29
*Annual Elec. Convention Held in Salt Lake—by M. L. Cummings, Jr. 343
Annual Meeting Held by Oregon Hydro League 115
Annual Meeting New Mexico Elec. Assn., Albuquerque 115
Annual Meeting of Engineering Council of Utah Held 390
Annual N. W. Convention to Convene 605
Annual Report is Published by B. C. League 153
†Annual Reports of Power Companies Now Designed for Consumer Owners 355
†Annual Summer Convention of A.I.E.E. at Swampscott 317
†Another Milestone Passed 353
*Another View of Cooperative Selling—by J. E. Bullard 56
*Apartment, Seattle, Elec. Install. 263
*Apartment Electrical, The—by O. R. Doerr 283
†Apartments, Electrified, Growing in Popularity on Pac. Coast 278
*Appliance Customer's Pocket Book, Reaching for 339
*Appliances, Elec., Getting New Angle to Sell—by J. W. Bullard 292
Appliances, Elec., Used by Elec. Men 258
*Appliances, Heavy, Demonstration Shows Utility of 108
Appliances, Heavy Electrical—Selling Service with 24
†Appliances, Use of, A Service 479
Application for Permit by Nettleton Power Co. 111
Application for Water, A. A. White, Albany, Ore. 70
*Applications of Elec. Oven in Automobile Industry 295
Arapahoe Light & Power Co. Provides Pwr. for Mach. Plant 28
*Arc Welding Apparatus, Electric, Industrial Applications 18
Architects—Coop. -with Field Man Suggested 188
Are You Conducting Your Business Efficiently? 60
Are You on Your Knees?—by Joe Osier 297
Arizona—
*Elec. Drive in Copper Mill 180
†Asia—Machinery Exports Increase 203
Asiatic Market for Machinery is Expanding 129
Aspen, Colo.—
Had Hydro Station in 1885—by C. E. Doolittle 169
Assn. of Electragists, Mtn. Div., Convention, Denver 466
Assn. of Electragists' Representatives Will Tour Continent 267
Astoria, Ore.—
*Dealer Opens Store 12 Hours After Big Fire 339
Elec. Sign Donated 231
Atlantic-Pacific Radio Supplies Co to Expand 69
Atlas of U. S. A. Elec. Power Industry 503
Australia Offers Market for Elec. Goods 281
Australian City Will Display New Appliances 357
*Auto Park, Electrically Equipped, Is Municipal Asset in Boise 135
*Automatic Control for Compressor Made from Street Car Parts 256
*Automatic Control for Small Currents 257
*Automatic Generat. Plants — Economies Effected—by R. C. Denny 435
*Automatic Machinery, Modern, Aids in Manufacture of Crossarms 287
*Automobile Industry, Applications of Elec. Oven 295
Automobile is Factor in Utility Service 166

B

B. C. Electric Railway Co., Ltd.—
Bldg. Permit for Substation 389
Contract Let for Distrib. System 152
*Cooperates with Dealers in Advertising 342
Host to Municipal Officials 506
Right of Way Contract Awarded, for Transmission Line 388
*Starts Develop. to Brittania Beach 189
To Construct High Tension Line 66
Transmission Line Contract Let 306
B. C. Electric Service League—
Annual Report Published 153
*Develop. Demand for Better Church Illumin. 462
†Bakers Ass'n Campaign—Make Toast Your Breakfast Food 400
*Bakery, Electrical, Marine Corps 58

EPH 24/VIII/25

Page
*Baking Contest, Pueblo ... 499
Bank, Denver, Proves Value of Elec. Idea 44
Baum, Frank G. Completes Book on Nat'l Superpower Survey ... 503
Beaverhead Transmission Co., to Start Transm. Line Cons. ... 303
*Begin Oper. World's Record High Volt. Power Line ... 387
Beheading Bee Featuring "The Other Bidders Were"—by Joe Osier ... 500
Bend, Ore.—Shevlin-Hixon Co. Buys Synchronous Condenser ... 67
Benn Bros. Pub. Elec. Trades Handb'k and Directory for 1923 ... 344
Better Public Relations Urged at New Mexico Convention ... 193
Bids for Modesto Distribution to be Opened May 2 ... 302
Bids on New Bldg. Accepted by Fresno Corp. ... 153
Bids Opened for Water Wheel, Eugene, Ore. ... 150
*Big Creek No. 1, So. Calif. Ed. Co. ... 84
Big Creek No. 3, Work Progressing ... 341
*Big Creek-San Joaquin River Project—More Than Million Hp.—by G. C. Tenney ... 245
Bill, Reed Power, Amended ... 227
Bill Which Would Abolish Utah Comm. is Rejected ... 190
Billboard Illumination—by Paul D. Howse and Tracy Simpson ... 407
Bingham, Utah—
Utah-Apex Min. Co. to Double Capacity ... 188
Bird in Wires Results in Lineman's Death 128
Bisbee, Ariz.—
Appliance Customer, Selling ... 339
Black, Miss Helen, Cooking Electrically 190
Blauvet, Major, Named Colo. State Hy. Eng'r ... 30
Blind Ass'n to Raise Funds, S. F. ... 503
Boats, Elec. Driven, Given Trials ... 304
Boise, Idaho—
*Elec. Equipped Auto Park ... 135
Bond Issue, L. A., Opposition to ... 464
Bond Issue Fails to Pass, L. A. ... 502
Books and Bulletins—
Atlas of U. S. A. Elec. Power Industry ... 503
Depreciation of Public Utility Properties ... 306
Direct Current Machinery ... 114
Electric Power Plant Engineering ... 192
Electric Toy Making ... 468
Elements of Applied Electricity ... 30
EMF Elec. Year Book 1923 ... 344
Engineering Economics ... 268
Hendricks' Commercial Register ... 70
Interior Wiring ... 344
Optical Methods in Control and Research Laboratories ... 192
Pender Handbook for Elec. Engrs. ... 30
Present Day Penstock Design ... 506
Rate Making for Public Utilities ... 344
Relativity and Space ... 390
Who's Who in Engineering ... 70
*Boulder, Colo.—Rotary Club Served Elec. Cooked Meal ... 267
Brass Furnaces, Future of Elec. ... 167
*Bridge Crashes Under Heavy Load, Cowlitz River ... 111
*Britannia Mining & Smelter Co. to be Served by B. C. Elec. Ry. Co. Power 189
British Set Example in Railway Merger 167
Broadcasting, Natl. Comm. Favored to Regulate ... 152
Broadcasting, Radio, Future Now Assured 281
Broadcasting Station, Genl. Elec. Co. 503
Broadcasting Station Will Be Erected in Denver ... 192
Broom—Plea to Cleaner Mftrs. to Play Fair with—by D. Arbaugh ... 169
Budget, Campaign, Discussed, Calif. Elec. Coop. Camp. ... 227
Builders Exchange Formed, Utah ... 306
Building Activity, New Records, 1922 ... 280
Bureau Plans Study of Street Lighting 166
†Business Barometers Indicate Approaching Period of Inflation ... 240
Butte, Mont.—
Elec. Men Organize ... 192
†"By Their Fruits Ye Shall Know Them" 42
Byllesby Co. Booklet Shows Growth of Std. Gas & Elec. Co. ... 389

C

Cable, Submarine, Laid in S. F. Bay ... 57
*Cable, Submarine Power, Is Laid Across Willamette River ... 467
California—
Demand for Water Rights Heavy ... 230
†Document on Power Systems ... 478
*Elec. Homes Displayed, Fresno, Long Beach ... 380
Engineering License Bill Live Issue 202
Forest Resources in Jeopardy ... 166
†Leading State in Hydroelectric Production ... 43
Leads All States in Hydro Projects ... 45
Mines Show Record Output, 1922 ... 82
*Use of Elec. Taught in Schools ... 337
Utilities Are Expanding ... 83
†Westward the Course of Empire Takes Its Way ... 239
California Advertising Effective ... 480
California Elec. Cooperative Campaign—
Advisory Committee Makes Plans ... 230
Budget, 1923, Discussed ... 227
†Coordination Needed to Supplement Cooperation ... 163
Dates Set for Elec. Home Displays 267
*Elec. Homes Displayed, Fresno, Long Beach, S. F. ... 380
*For Sale—A Service ... 277
How Many Elec. Men are Elec. Users ... 258
*June Bride Week Campaign, Plans Perfected ... 335
*Offering Merchant Better Window Lighting ... 186
*Portable Window Display is Arousing Interest ... 501
Selling the Organiz. to the Trade 182
Sets Budget for 1923 ... 152
*California Institute of Tech. Million-Volt Laboratory ... 217
California Oregon Power Co.—
Sawmills Served, Chiloquin Dist. ... 190
Starts Transmission Line Work ... 386
To Rebuild Lines, N. Calif. ... 305
To Take Over Douglas Co. L. & P. Co. ... 345
Uses More Elec. Pwr. Per Capita 306
California Rivers Are Subject of Power Board Survey ... 607
California State Assn. of Elec. Contrs. &Dealers—
*Donner Lake Convention Place ... 469
Meet at Donner Lake ... 269
To Meet in Sacramento ... 71
California State Railroad Commission—
Funds Are Threatened ... 480
†"By Their Fruits Ye Shall Know Them" ... 41
†Classification of Accounts for Elec. Pub. Utilities ... 126
Four Members Named ... 66
Gt. Western Pwr. Schedule Revised 70
P. G. & E. Given New Rate Base 68
Moves Offices ... 305
Qual. for Commissioners Explained by Fresno Engr.—by B. K. Jakobsen ... 129
Rehearing of Pwr. Co. Rates ... 153
Reports Calif. Utilities Expanding ... 83
California Tel. & Lt. Co., Control Purchased by P. G. & E. ... 229
California Wire Company Gets 2 Large Contracts ... 190
*California Wire Co. Opens S. F. Warehouse ... 466
Campaign Budget Requirements, 1923, Are Discussed, Calif. Elec. Coop. Cam. 227
Camps, Tourist, Will Be Elec. Lighted, Colo. ... 343
Canadian Co. to Dbl. Plant Capac., W. Kootenay L. & P. ... 264
Canadian Co. to Construct New High Tension Line ... 66
Canadian Power Co. is Host to Municipal Officials, Vancouver ... 506
Canals for Sale, Klamath Falls, Ore. ... 226
Canton, China, Contract Awarded, Elec. Supply Co. ... 113
Capital Electric So. Tech. Sales Problems Handled by Engr. ... 344
*Car, Gasoline Electric, Designed for Swiss Railroad ... 17
Car Shortage May Hinder Business Revival ... 319
Caribou Plant, Third Unit Planned ... 229
Carrier Current Demonstration—Error in Editorial on—by A. A. Isbell ... 243
†Carrier Current Demonstration of Interest to Power Companies ... 164
Cars Ordered by Oakland Tractn. Co. ... 67
Carson-Truckee Irrig. Dist. Directors Approve Power Contract ... 150
Casa Grande Water Dept. Installs Diesel Engine ... 303
*Cascada Communication Bldg., So. Cal. Ed. Co. ... 358
*Castles in the Air ... 84
Cedar City Application Dismissed ... 269
Celebrate 30 Yrs. of Hydro Progress ... 82
Central Mendocino Co. Pwr. Co. Acquires Properties, Willits ... 231
Central Mendocino Co. Power Co. Applies for Power Permit ... 69
Central Pacific Railroad Seeks Permit for Cutoff ... 302
Central Station Assn. is Host to Denver Club ... 469
*Central Station Industry, Pioneering in the—by John A. Britton ... 85
Central Station Merchandising and Credits Discussed ... 468
*Central Station Opportunities in Elec. Vehicles—by Front and Sandoval ... 420
*Central Station Service for the Miner ... 257
Central Stations Urged to Try for Coffin Fund Prizes ... 191
Chamber of Commerce, Fresno, Advocating System of Electroliers ... 29
Chance Line Anchors Distributed by Pacific States Elec. Co., S. F. ... 506
Chandler, Ariz.—
Street Light. System Contemplated 230
Changes in Natl. Elec. Code Recommended ... 264
*Changing Miner's Inches to Kw-Hr.—by Geo. C. Tenney ... 49
Chase, S. A., Guest of Elec. Men, Salt Lake ... 155
*Chase, Saml. A., Visiting Pac. Coast ... 191
*Check Seal Campaign, History of Adoption—by D. E. Harris ... 105
†Check Seal Campaign—Pacific States Electric Co. to Continue ... 81
Check Seal Program, Meetings Held to Discuss ... 112
Cheyenne, Wyo.—Organized Elec. Club 391
Chicago Concern Has Novel Removal Notice ... 262
Chiloquin District Sawmills Served with Power ... 190
Chinese Engineers, Many Problems Confront ... 5
Christmas Sales Exceed All Previous Records, Denver ... 69
†Chronological Tabulation of Western Hydroelectric Plants ... 81
*Church Illumination, Better, Develop Demand for ... 462
*Circuit Breaker, Oil, Develop—by H. Michener ... 427
City of Seattle Planning More Complete Street Light ... 342
City of Seattle Plans Material Reductions in Rates ... 340
City of Seattle Will Build 100-Mile Transmission Line ... 226
Classification Uniform, of A/cs—by C. P. Staal ... 432
Cleveland League, Elec., Program Involves $60,000 ... 243
Coast Power Company—To Increase Generat. Capacity ... 30
Code, Nat'l Elec., Change Recommended 264
†Coffin Foundation Medal—West Leads Again ... 477
Coffin Fund Prizes, Central Stations Urged to Try for ... 191
*Coffin Medal Awarded So. Cal. Ed. Co. 503
Colorado—
*Fourth Elec. Home Displayed ... 389
Johnstown Has Wired Homes Record 343
Major Blauvet Named State Highway Engineer ... 30
Moffat Tunnel Contract Not Let ... 266
Tourist Camps Will Be Elec. Lighted 343
Universities Teach Util. Subjects ... 44
†Colorado Compact—Failure Halts River Develop. Plans ... 401
Colorado Power Company—
Elec. Energy for Moffat Tunnel ... 226
Colorado Public Utilities Comm. Discusses Accounting, Denver ... 231
Colorado River—
Capt. Jarvis Discusses Develop. ... 31
Diamond Creek Dam ... 66
†Develop. Held Up by Arizona and Colo. ... 203
†Failure of Compact Halts Develop. Plans ... 401
League of S. W. Discusses Projects ... 502
One State Has Not Ratified Pact ... 150
Pact Threatened by Politics ... 242
Possible Dam Sites ... 170
Ratifying Compact ... 112
†Treaty Awaits Ratification by One State ... 127
Colorado Springs, Colo.—
Enforcement of Elec. Wir. Rules ... 464
Colorado Springs Lt., Ht. & Power Co.—
Loses Fight for Franchise ... 506
Threatened with Pub. Ownership ... 356
Colorado Towns Have Cooking Schools ... 466
Colorado Utility Threatened with Public Ownership ... 356
†Colored Cases—Effects on Oil Temperature of Distrib. Transf.—by Moore and Moulton ... 433
Columbia Basin League, 2nd Conference ... 386
†Columbia Basin Project is of Great Importance to the N. W., The ... 354
Columbia Valley Power Co. Opens Office, Portland ... 469
Columbia River—
Kett'e Falls Plant First ... 266
Project to be Investigated ... 264
Columbia Steel Corporation—
Acquires Coal Land ... 151
Add Train Serv. for Workmen ... 303
Immediate Cons. ... 228
Columbia Steel Plant Construction Work Started ... 388
†Combine Business with Pleasure—Plan to Attend the Conventions ... 354

Page

Commerce Figures Do Not Represent Meas. for Diff. Ports—by Albert E. Greene ... 168
Commercial and Wiring Sections, N.E.-L.A., Meet, Denver ... 115
Commission Orders Consumers to Pay Standard Rates, Utah ... 29
Commission Will Try to Enforce Union Depot Erection ... 26
Commissioners' Qualifications, Engineers Disagree with Editorial on ... 6
Committees Appointed to Aid in Arranging Radio Show, S. F. ... 228
Committees for Ogden Engineers Are Named by Directors ... 227
Committees for S. F. League Are Appointed ... 269
Commodity Prices Compared with Gas and Electric Rates ... 27
Commonwealth Edison Co. Publish Free Coupon for Floor Pattern ... 262
*Communication Bldg., So. Cal. Ed. Co. ... 358
*Communication Developments, Power Co. ... 359
*Communication Sub-Committee's Report ... 359
†Community Prosperity Determines Success of the Pub. Util. ... 316
Company Plans to Sell Holdings to Local Competitor, Del Monte ... 29
†Competition, Destructive, vs. Sound Regulation ... 278
Complete First Unit of G. E. Okld Plant 268
Complete Ore. Hydro Power Plant by March ... 68
Construction, Elec., Dept. Arouses Interest—by E. E. Browne ... 481
†Construction, Elec., New Dept. ... 316
*Construction of Steam-Elec. Plant in Oregon Started ... 265
Construction News ... 36, 77, 120, 160, 198, 236, 274, 312, 350, 396, 474, 512
Construction Work on Columbia Steel Plant is Started ... 388
Construction Work Started on Elec. Log. Rd. ... 67
†Consumer-Ownership, Private Initiative and Pub. Regulation Spell Service ... 278
Contract Awarded for Chinese Extensions 113
Contract for Clearing Right of Way Has been Awarded, B. C. Elec. Ry. Co. ... 388
Contract Form, New, Prepared for Elec. Men ... 146
Contract Let for High Voltage Insulator Factory ... 110
Contract Let for Valves, Oak Grove Project ... 305
†Contractor—Motto Suggested For ... 479
*Contractor, Elec., A Service for ... 331
Contractor-Dealer, Elec., Outlook for Coming Year—by E. E. Browne ... 169
Contractor-Dealer Questionnaire ... 60
*Contractor-Dealer's Store, Locating ... 259
*Contractor-Dealers Assemble at Donner Lake, June 10-16 ... 469
Contractor-Dealers Meet, Sacramento, Calif. ... 71
Contractor-Dealers to Discuss Tech. Subjects ... 269
Contractor-Dealers to Meet at Donner Lake in June ... 269
Contractor-Dealers Play, L. A. Elec. Club Sees ... 192
Contractors, Assoc. Genl., Pac. N. W. Branch, Hold Convention, Seattle ... 193
Contractors and Supply House Representatives in Denver to Organize ... 307
*Control, Autom., for Compressor Made from Stock Street Car Parts ... 256
*Control, Autom., for Small Currents ... 257
*Convenience Outlets, Placing in Every Room—by Garnett Young ... 207
Convention Dates Are Set by Elec. Assns. ... 71
Convention Delegate Report to Entire Local Sectn. Membership, Let—by L. N. Robinson ... 6
Convention Held in L. A. by Mech. Engrs. ... 391
Convention Papers—
*A. C. Substations—by R. C. Powell ... 442
Analysis of Data on Cooking, Water and Air Heating—by J. W. Wrenn 413
*Autom. Generat. Plants—Economies of—by R. C. Denny ... 435
Business Possibilities in Residence Lighting—by R. S. Prussia ... 409
*Distribution Transformers—3-ph. vs. Sing. Ph. for—by E. Y. Porter ... 455
*Effects of Colored Cases on Oil Temp. of Distrib. Transformers—by Moore and Moulton ... 433
Elec. Signs and Billboard Illum.—by Howse and Simpson ... 407
Indus. Elec. Heating—by Criddle and Sievers ... 416
Install. and Oper. of Underground Systems—by E. R. Northmore ... 426
Lighting of Retail Stores—by R. S. Prussia ... .
*Merchandising Elec. Ranges—by Nicoll and Cram ... 403
Meters—Test, and Maintenance—by W. H. Talbott ... 446
Need for Better Illumination—by C. O. Martin ... 406
Observations on Oper. of Power Transformers—by G. M. Wills ... 425
Office Building and Flood Lighting—by Chas. T. Phillips ... 411
*Oil Circuit Breaker Develop.—by H. Michener ... 427
*Opportunities for Cent. Sta. in Elec. Vehicles—by Frost and Sandoval ... 420
*Overhead Transmission Systems—by J. A. Koontz ... 444
*Power Co. Communication Develop. ... 359
*Problems in Steam Plant Oper.—by E. A. Quinn ... 370
Progress Toward Induct. Co-Ordination—by J. E. Woodbridge ... 419
*Purchasing and Storing—by C. A. Kelley ... 438
Rate Schedules, Analysis—by E. B. Criddle ... 448
Report of Relay Subcommittee—by E. R. Stauffacher ... 429
Safety Rules Develop.—by R. R. Cowles ... 488
Study of Domestic Refrigeration—by H. C. Rice ... 418
Uniform Classification of Accounts—by C. P. Staal ... 432
Value of Better Show Window Lighting—by Clark Baker ... 411
*Convention Program, Pac. Coast Elec. Assn., S. F., June, 1923 ... 459
Convention Program Announced, P.C.-E.A., S. F. ... 504
Conventions—
A.I.E.E., Del Monte, October ... 307
A. I. E. E., Plans Completed, Del Monte ... 155
†A.I.E.E., Swampscott ... 317
A.S.M.E., L. A. ... 269
Am. Soc. M. E., Los Angeles ... 307
Am. Soc. M. E., L. A., Held, April ... 391
A.S.M.E. Plans Being Made, L. A. ... 190
Assn. Electragists, Mtn. Div. ... 466
Amer. Electrochem. Soc., Dayton, O. ... 507
Commercial Comm., Pac. Coast Elec. Assn., Fresno ... 230
Committees Appointed, A.I.E.E., Del Monte ... 71
Contr.-Dlrs., Donner Lake, June ... 269
Contractor-Dealers, Sacramento ... 71
Denver Lt. Co. Entertains Advertising Clubs of World ... 231
Hydroelectric League, Ore. ... 115
N.E.L.A., Denver ... 115
N.E.L.A., Denver ... 154
*N.E.L.A., Denver ... 140
N.E.L.A., New York, June 4-8 ... 71
N.E.L.A., June Program Announced ... 391
New Mexico Elec. Assn. ... 193
New Mex. Elec. Assn., Albuquerque ... 115
N. W. Elec. L. & P. Assn., Seattle, ... 193, 231, 505
Ore. Retail Hardware Dealers' Assn., Portland ... 231
Pac. Coast Elec. Assn., Fresno ... 307
Pac. Coast Elec. Assn., June 19-22, S. F. ... 71
Pac. Coast Elec. Assn. Exec. Meet., L. A., Plans for Annual ... 231
P. C. Elec. Assn. Plans Announced 268
Pac. Coast Elec. Assn. Scheduled, S. F. ... 115
Pac. Coast Elec. Job. Assn. ... 468
Pac. Div. Elec. Sup. Job. Assn., Del Monte ... 115
Pacific Div. Natl. Elec. Supply Jobbers, Del Monte ... 155
Pac. N. W. Branch, Assoc. Genl. Contrs., Seattle ... 193
Portland Sectn., A.I.E.E. and N.E.-L.A. ... 115
Reclamation, Salt Lake City ... 151
Reports Considered, Pac. Coast Elec. Assn., Fresno ... 229
*Rocky Mtn. Elec. Coop. League ... 343
Converter Equip. Ordered by St. Ry., S. F. ... 464
*Cook Electrically, Teaching the Housewife to—by Ray W. Turnbull ... 171
Cooking, Water and Air Heating, Analysis of Data—by J. W. Wrenn ... 413
*Cooking Contest, Pueblo ... 499
*Cooking. Elec.—Meal Served Boulder Rotary Club ... 267
*Cooking School, Star-Journal, Pueblo ... 499
Cooking Schools, Ordway, Crowley and Sugar City, Colo. ... 466
Cooperage Plant, New, Portland, Ore. ... 30
†Cooperation—Coordination is Needed to Supplement ... 163
Cooperation with Architects Suggested by Field Man ... 188
Cooperative Effort in Educating the Community ... 220
*Cooperative Selling, Another View—by J. E. Bullard ... 56
†Coordination is Needed to Supplement Cooperation ... 163
Coos Bay Lumber Co. Plans Improvements at Marshfield ... 340
*Copper Mill, Arizona, Advanced Application of Elec. Drive ... 180
†Cost Bubble in Elec. Home Oper., Puncturing ... 317
†Cost of Electricity Decreased ... 479
Cost of Oper. Calif. Elec. Home Interests Engr.—by Ralph J. Patterson ... 481
†Costs, Distribution, Immediate Need Exists for Study of ... 42
Costs, Oper. of Elec. Home—by H. L. Garbutt ... 330
Coupon for Floor Pattern Published by Commonwealth Edison Co. ... 262
†Court Decision of Great Importance to Power Progress, L. A. ... 400
*Cowlitz River Bridge Crashes Under Heavy Load ... 111
Craig, Colo.—
Steam-Elec. Plant Nearing Completion ... 111
Crane Valley Power House to be Enlarged ... 114
*Crane Valley System Power House ... 130
†Credit, Extension of, Definite Criteria Upon Which to Base ... 401
Credits Discussed, Merchandising and ... 468
*Crossarms, Modern Autom. Mach. Aids in Manufacture ... 287
Current Comment ... 4, 44 82, *128, 166, *204, 242, 280, 318, 356, 480
*Currents, Small, Autom. Control for ... 257
Custer County Elec. Co. Incorporates ... 507
Customer Ownership Campaign Started by Seattle Co. ... 305
†Customer-Ownership of Securities, Prizes for Best Paper on ... 279
†Customer-Ownership of Securities Secures National Recognition ... 164

D

Daily Production of Electricity Breaks Records ... 205
Dam Sites on Colorado River, Possible ... 170
*Dealer, Astoria, Opens Store 12 Hr. After Big Fire ... 339
†Dealer, Wise, Recognizes Value of Installment Plan ... 278
*Dealer Distributes Thermometer to Customers ... 262
Dealer's Problem, Electrical—by C. Wilbur Fritz ... 53
Decision Handed Down in Johnson Valve Patent Suit ... 304
†Definite Criteria Upon Which to Base the Extension of Credit ... 401
Del Monte L. & P. Co. to Sell Holdings ... 29
Demand for New Water Rights, Calif., Heavy ... 230
*Demonstration Shows Utility of Heavy Appliances ... 108
Denver, Colo.—
Alleys Will be Lighted ... 341
Assn. of Electragists, Mtn. Div. ... 466
Bank Proves Value of Elec. Idea ... 44
Broadcasting Station Will be Erected 192
*Celebrates Completion of Street Lighting System ... 68
Christmas Sales Exceed All Previous Records ... 69
Contractors to Form Organization ... 307
Doherty Mens Fraternity Host ... 469
Elec. Coop. League Holds Party ... 71
Elec. Idea Advanced by Radio ... 306
Elec. Industry to Have Telephone Party ... 307
Elec. League Entertains Real Estate Exchange ... 345
Elec. Spectacle Planned ... 305
Electricity to Blame for Few Fires ... 241
First Elec. Home Purchased ... 192
League Starts Campaign with Archts. 318
League Will Interchange Ideas with Builders ... 191
McIntyre, K. A. Visits Coop. Lge. ... 188
*Meter, 75,000th, Installed ... 113
†Municipal Ownership to be Issue in City Elections ... 164
N.E.L.A. Convention ... 115
N.E.L.A. Meeting ... 154
Public Ownership Candidate Elected Mayor ... 467
Public Ownership Clouds Overhang Utilities ... 167
Ry. Co. Builds Elec. Locomotives ... 191
Standardization of Accounts Discussed ... 231
Water Comm. Orders Pump. Units ... 342
Will be Served by Large Steam-Elec. Plant ... 110
Denver & Intermtn. Ry. Co. Builds Elec. Locomotives ... 191
Denver Assn. of Elec. Contrs. and Dealers Offer Prize for Emblem Design ... 307
Denver Electrical Cooperative League—
Resumes Radio Meetings ... 468
Starts Campaign with Archts. ... 318
Will Interchange Ideas with Builders 191
Denver Gas & Electric Company—
Banquet, Feb. 1 ... 153
Dinner Dance ... 231
Honor Local Manager ... 307
*Making Elec. Sticker Productive ... 260
Steam-Elec. Plant ... 110
*Suggestions Used to Sell Elec. Fans ... 500

Page

Denver League Entertains Real Estate Exchange at Meeting 345
Denver Man Urges Importance of Pub. Util. Advertising 344
Denver Power Co. Men Honor Local Manager 307
†Department, New, Devoted to Elec. Cons. 316
Department on Elec. Cons. Arouses Interest of Trade—by E. E. Browne 481
*Department Store Methods for Merchandising Washing Machines 13
Design Transformer to Prevent Fire and Explosion 67
†Destructive Competition vs. Sound Regulation 278
*Develop Demand for Better Church Illumination 462
Developing Business that Will Bring Repeat Orders—by R. E. Chatfield 296
†Development, Hydroelectric, Presages Continued Prosperity in West 203
†Development of Colorado River Held Up by Arizona and Colorado 203
Development of Elec. Power Planned by Sacramento 266
Development Program, Hydroelec., Involves 185,500 kw., 1923 96
†Diagnosis of Our Political Troubles Discloses Ignorance and Selfishness 80
Diamond Creek Power Dev. Dam Permit 66
Diesel Engine Installed, Casa Grande 303
Directed Wireless System of Dispatch 319
Directors' Nominees Announced, A.I.E.E. 267
Directors of Carson-Truckee Irrig. District Approve Power Contract 160
Discussion 6, 46, 129, 168, 243, 481
†Distribution Costs, Immediate Need Exists for Study of 42
*Distribution Transformers, Oil Temperature, Effects of Colored Cases—by Moore and Moulton 433
*Distribution Transformers, 3-ph. vs. Single Phase for—by E. Y. Porter 455
Division of Water Rights, Dept. of Pub. Works; Report Interesting 356
Dixie Power Co. to Develop Energy 342
Doherty Mens Fraternity Host, Denver 469
Domestic Refrigeration, Study of—by H. C. Rice 418
Don Pedro Power Hse. Put in Service 305
*Donner Lake Convention Place for Contr. Dealers, June, 1923 469
Donner Lake Meeting, Contr.-Dlrs., June 269
Douglas, Ore., Co. L. & P. Co. Properties to be Surveyed 345
*Dream Bungalow, Pueblo, 6,000 Visit 300
Drink With Familiar Friends—Compare Bids With No One—by Joe Osler 336
Drum System to be Improved 264
Duplicate Light and Power Service, Palouse District, Washington 151
Durant Motor Co.—
*Elec. Oven Application 295

E

Eagle Rock Service Resumed After Fire 111
Eagle Rock Transformers Completed 303
Eastern Engineer is Interested in Cost of Oper. Calif. Elec. Home—by Ralph J. Patterson 481
*Economies Effected by Installation of Automat. Generat. Plants—by R. C. Denny 435
Edison Co. Will Add 30,000 Homes to Lines in 1923 340
Edison Lamp Works Advertising Described to Utah Men 391
Edison Partners—First Issue 342
Educate Both the Electrical and the Non-Electrical Merchants—by S. W. Bishop 7
†Educate the Home Builder to Demand Quality Installations 126
*Educational Week, Elec. Co. Conducts 61
*Effects of Various Colored Cases on Oil Temperature of Distribution Transformers—by Moore and Moulton 433
*Election Heating Installation Advertises Dealer 23
†Elections, Denver, Municipal Ownership to be Issue 164
Electragists' Representatives Will Tour Continent 267
Electric Appliances, Melbourne Will Display 357
*Electric Appliances, New Angle to Sell—by J. E. Bullard 292
*Electric Appliances Installed for Domestic Science Classes 69
*Electrical Bulbs Used for Window Display 297
Electric Clubs—
Butte Organizes 192
Cheyenne Organizes 391
L. A. Celebrates Progress of Industry 115
L. A. Elects Officers 193
L. A. Makes Orphans Happy 71
L. A. Public Officials Are Guests 70
L. A. Sees Contr.-Dlr. Play 192
L. A. Sees Portable Window Display 231
L. A. Spec. Meet 467
L. A. Takes Part in Parade 507
L. A. To Publish Roster 307

Page

Oakland Addressed by J. David Houser 192
Oakland Addressed by Underwriters' Representative 307
*Oakland Guests on Turbo-Elec. Ferry 507
San Diego—Adams, H. A., Speaker 230
San Diego Elects New Officers 193
San Diego Plans Home Display 269
San Diego, Zweiner, J. F., Appoints Committees 231
Seattle and Tacoma Hold Dinner Dance 388
Wenatchee Organizes 345
†Elec. Develop. of Europe Proceeding at Rapid Rate 400
*Electric Drive in Arizona Copper Mill, Advanced Application 180
Electric Energy for Sluicing Desired, Huntington, Utah 388
*Electric Fans, Suggestions Used to Sell 500
*Electric Ferry Launched, S. F. Bay 152
*Electric Furnace in Western High Grade Metal Foundry 143
Electric Heat—Opportunity in Foreign Markets 205
Electric Heating, Industrial—by Criddle and Sievers 416
Electric Heating is Discussed Before S. F. League 345
†Electric Heating Should Not be Unwisely Discouraged 42
†Electric Home Operation, Puncturing Excessive Cost Bubble 317
Electric Lamp Dealer, U. S. as an Aid 107
†Electric Light and Power Industry Now Among Largest in Nation 355
Electric Light Used for Poultry Indus. 204
Electric Logging Road Construction Started 67
Electric Railway & M. S. Consolidates with Fobes Supply Co. 342
Electric Railroad to be Built in Montana Territory 190
*Electric Range—Proving the Util. of 498
*Electric Ranges, Merchandising—by A. H. Nicoll and Herbert Cram 403
Electric Ranges Served by New Distribution Line, Salem 116
Electric Rate Increase Granted Munic. Plant, Fairview, Wash. 113
*Electric Reduction Furnace Iron for a Steel Making Base—by R. C. Gosrow 16
Electric Service Provided for Gypsum, Colo. 342
Electric Sign Donated to Astoria, Ore. 231
Electric Signs and Billboard Illumination—by Paul D. Howse and Tracy W. Simpson 407
Electric Storage Battery Co. Entertains Elec. Vehicle Representatives, L. A. 391
Electric Store of Idaho Power Co. in New Location 389
Electric Supply Co., Canton, China, Awards Contracts 113
Electric Truck Day to be Held by Develop. League, S. F. 469
*Electric Truck Parade to be Held in S. F. 505
Electric Vehicle Representatives, L. A., Guests of Elec. Storage Battery Co. 391
*Electric Vehicles—Opportunities for Central Sta.—by Frost and Sandoval 420
Electrical Advertising Field Shown in Recent Survey 185
*Electrical Apartment—by O. R. Doerr 283
*Electrical Applications, Importance of Neatness In 294
*Electrical Company Conducts Educational Week 61
*Electrical Construction—by E. Earl Browne 332, 378, 460, 494
†Electrical Construction, New Dept. 316
Electrical Construction Dept. Arouses Interest 481
*Electrical Contractor, A Service for 331
Electrical Contractor, New Form for 146
Electrical Contr.-Dealer—Outlook for Coming Year—by E. E. Browne 169
*Electrical Contr.-Dealer's Store, Locating 259
Electrical Contr.-Dealer Assn. Ball, L. A. 115
Electrical Contr-Dealers' Assn., S. F., to Discuss Tech. Subjects 269
*Electrical Convenience Outlets, Placing in Every Room—by Garnett Young 207
Electrical Convention, Pac. Coast Elec. Assn. Scheduled., San Francisco 115
Electrical Coop. League, Denver—
Entertains Real Estate Exchange 345
Holds 2nd Elec. Party 71
To Have Telephone Party 307
*Electrical Dealer, Radio and—by David Sarnoff 486
*Electrical Dealer's Problem, The—by C. Wilbur Fritz 53
Electrical Development League, Election Meeting, S. F. 155
Electrical Goods, Australia Offers Mkt. 281
Electrical Home, Oper. Costs—by H. L. Garbutt 330
*Electrical Home and the Small-Sized City, The 148
Electrical Home Display—San Diego Elec. Club Plans 269

Page

Elect Home Display Dates Set, California 267
Electrical Homes—
*Colorado Displays Fourth 389
Cost of Oper. Interests Engr.—by R. J. Patterson 481
Denver, H. A. Jacobsen Purchases 192
El Paso, Spanish Type 222
Japan Securing Plans 454
Loveland, Colo. 64
Pueblo, Dream Bungalow 300
*S. F. Displays Second 496
S. F., Officially Opened 380
*Small-Sized City and 148
Electrical Homes Displayed, Fresno, Long Beach 380
Electrical Idea, Selling to Pwr. Co. Employees 297
Electrical Idea is Advanced by Denver Radio Matinees 306
†Electrical Industry—Rural Stretches Challenge 479
Electrical Industry in West, 1923 100
*Electrical Install. in Seattle Apt. 263
Electrical League of Cleveland, Program Involves $60,000 243
*Electrical Lift. Magnets—Fitting to Needs of Indus. User 142
Electrical Men, How Many Are Elec. Users? 258
Electrical Men Discuss Future Growth of Industry 155
Eletctrical Men, L. A., Hold Spec. Meet. 467
†Electrical Merchant's Day to Promote Show Window Lighting 43
†Electrical Ordinances Have Not Kept Pace with Use of Electricity 3
*Electrical Outlets, Selling to the Home Builder—by D. E. Harris 105
*Electrical Oven, Application in Auto Indus. 295
Electrical Party Held by Denver League 71
*Electrical Product—Sell to the Industry First—by J. E. Bullard 144
†Electrical Progress, Recording Yr. 399
Electrical Service League, B. C., Pub. Annual Report 153
*Electrical Show, S. F. 384
Electrical Society Will Issue Two New Pamphlets 190
Electrical Spectacle Planned for Denver Exposition 305
*Electrical Sticker, Making Most Productive 260
Electrical Supply Jobbers, Pac. Div., Meeting, Del Monte 116
Electrical Trades Handbook and Directory for 1923 Published 344
*Electrically Cooked Meal Served to Boulder Rotary Club 267
Electrically Driven Boats Given Trials 304
*Electrically Equipped Auto Park is Municipal Asset in Boise 136
Electrically Heated Homes—Takes Issue on Subject—by W. F. Burrell 243
Electrically Lifting the Black Gold 59
*Electrically Operated Well at Base of Point Firman Cliff 176
Electricity, Daily Production Breaks Records 205
Electricity, Use of, Taught in Calif. Schools 337
†Electricity and Progress 79
†Electricity and Use of Appliances A Service 479
†Electricity Cost Decreased 479
*Electricity in Industry—by Louis F. Leurey 18, 58, 142, 180, 218, *256, *294
Electricity to Blame for Few Fires, Denver 242
Electrification Contract, Large, Let by Eastern Railway 389
†Electrified Apartments Growing in Popularity on Pacific Coast 278
*Electrifying the Merchandising Figure of the Dealer 297
Electrochemical Society, Amer., Meeting, Dayton, Ohio 507
*Electrolytic Action, Rail Bases Destroyed Through 217
Elko Lamoille Power Co. Installs Diesel Engine 70
El Paso, N. M.—
*Spanish Type Elec. Home 222
E.M.F. Elec. Yr. Book, 1923, Published 344
Enforcement of Wiring Rules, Colo. Springs 464
Engineering Council, Utah Election 226
Engineering Council, Utah, Holds Annual Meeting 290
†Engineering License Bill, Proposed, Live Issue in California 202
†Engineering Profession, Increasing Interest Being Shown in Ethics 202
†Engineering Qualifications for Regulatory Bodies 2
Engineering Standards Committee Issues Year Book 304
Engineering Work, Promotional, Explained to Engineers, Salt Lake City 391
†Engineers, Scientists and Editors Plan to Standardize Symbols, etc. 241
Engineers, Utah, Will Establish Permanent Headquarters 113

Page

Engineers' Club of San Francisco—
*Guests on Turbo-Elec. Ferry 507
Engineers Completing Plans for Pacific Coast Meeting 155
Engineers' Day, U. of C., Berkeley 193
Engineers Disagree with Editorial on Utility Commissioners' Qualifications 6
Engineers Regional Meeting to Be Held in Los Angeles 269
*Entrance Switches, Standardized 492
Equipment for First Oak Grove Unit is Ordered 27
Equipment for Power Plant, Long Bell Co. Orders 340
Erection of Substation Starts Construction Program 112
Error in Editorial on Carrier Correct Demonstration—by A. A. Isbell 243
Eugene, Ore.—
Bids Opened for Water Wheel 150
†Europe—Elec. Develop. Rapid 400
Events in Washington of Interest to Western Men 112
*Every Dealer Can Trim His Own Windows With Service Prepared by Manufacturer 62
Executives Visit Extensions of Spokane Power Company 466
Exports, Elec., from U. S., October 57
†Exports, Machinery, to Asia Increase Seven Fold 203
Exposition, Denver, Elec. Spectacle Planned 305
Exposition, Mining, Planned, Salt Lake 267
Exposition, S. F., Radio and Elec. 265
Extension Rules, New, Made in State of Washington 110
Extensive Enlargements of Salt Lake & Utah R. R. 112
Extensive Improvements by Mtn. States Power Co. 228

F

Factory for Genl. Elec. Co., Oakland 226
†Failure of Colorado Compact Halts River Develop. Plans 401
*Falls, Unnamed, Potential Sources of Energy 244
*Fans, Elec., Suggestions Used to Sell 500
Farm Users of Electricity to Receive Rebate, Idaho 68
†Federal Power Act, Integrity Should be Preserved 81
Federal Power Applications, 400 319
Federal Power Commission—
Halts Action on Applications 502
Petition Conflicts with Earlier Request 266
Petitions Filed from West. States 229
Power Applicatons Acted on 150
Pwr. Develop. Plans Approved, Calif. 228
Preliminary Permits Issued 188
Surveys, Calif. Rivers 507
Federal Reserve Bank Reports Trade Activity 318
Federal Reserve Report Shows Power Demand Increasing 204
Federal Washer Ads Contain Free Coupon for Floor Pattern 262
*Ferry, Turbo-Elec., on S. F. Bay 507
*Ferryboat, Elec., Launched, S. F. Bay 152
Ferryboat, Elec. Driven, Given Trial 304
Fifty-five Street Cars Ordered by Oakland Traction Co. 67
Final Idaho Power Rate Hearing to be Opened, April 30 302
Financial Relations of the Jobber with his Customers—by S. B. Anderson 175
Fires, Elec. to Blame for Few, Denver 241
Financing Co. Formed to Handle Western Business 303
Fire Damages So. Calif. Ed. Co. Substation 66
†Fires, Proposed Classification Meets with Underwriters' Approval 165
Fisher, R. E., To Arrange Transportation to N.E.L.A. Convention 307
*Fitting Electrical Lifting Magnets to Needs of Indus. User 142
Five Snake River Districts Join New Irrigation Project 190
Flats—Electrical Construction 494
Flood Control Scheme Presented by Utah State Engineer 112
Flood Lighting, Office Bldg. and—by Chas. T. Phillips 411
Florence Electric Co. Plans Pwr. Plant 268
Fobes Supply Co. Consolidates with Elec. Ry. & M. S. Co. 342
†For Sale—A Service 277
Ford Plant, Los Angeles, Will be Largest in West 113
†Fordney-McCumber Tariff Act Accords Manufacturers New Rights 80
Foreign Markets, Opportunity for Elec. Heat in 205
Forest Resources in Jeopardy, Calif. 166
†Fostering Public Relations by Conducting Inspection Tours 354
Four Hundred Federal Power Applications 319
Four Members Named for State R. R. Comm. 66

Page

Fourth Elec. Home is Displayed in Colo. 389
Franchise Fight Lost by Colo. Springs Co. 506
Fresno, Calif.—
*Elec. Home Displayed 380
Electroliers for Commercial Park 29
Fruit and Produce Market Terminal Planned, S. F. 229
Funds of Util. Comm. Are Threatened 480
*Furnace, Electric, in Western High Grade Metal Foundry 143
*Furnace, Open Hearth Steel, Pacific Coast Steel Co. 206
Furnaces, Brass, Future of Elec. 167
Furnaces, Electric, Tested in Colo. 27
Future of Elec. Brass Furnaces 167
*Future of Elec. Industry Discussed, N.E.L.A. Meetings, Denver—by S. W. Bishop 140
Future of Radio Broadcasting is Now Assured 281

G

General Electric Company—
Employees Are Offered New Saving Plan 266
Factory, Oakland 226
First Unit Completed, Okld. 268
Plans Broadcasting Station 503
*Generating Plants, Autom., Economies Effected—by R. C. Denny 435
Generators for Hetch Hetchy Shipped by G. E. Co. 391
*Gerlach, Nev., Elec. Install. Gypsum Plant 218
*Getting a New Angle of Approach to Sell Elec. Appliances—by J. E. Bullard 292
Geysers Development Co. Files Articles of Incorporation, Sonoma Co., Calif. 27
Gold, Black, Electrically Lifting 69
†Goodwill Adventures Needed in Public Utility Field 3
Goshen, Utah, Closes Contract with Utah Power & Lt. Co. 188
Governing Body of Information Committee Is Enlarged 26
Government Radio Plant May Be Installed at Salt Lake 386
Government Specifications for Petroleum Products Set 192
Granby Consol. M. S. & P. Co. Increasing Power Plant Capacity 26
Grangeville Light & Power Company—Prelimin. Surveys Completed 303
*Grauman's Metropolitan Theater—by George C. Tenney 131
Grays Harbor Northern R. R. Plans Construction of Railroad 26
Great Basin Power Co. Offers Rights to Ogden and Salt Lake City 231
Great Western Power Company—
Caribou, 3rd Unit Planned 229
Rate Schedule Revised 70
Rehearing for Increasing Rates 153
Gypsum, Colo.—
Elec. Service Provided 342
*Gypsum Plant, Modern Elec. Installation 218

H

†Happy New Year 1
*Harbord, Genl. J. G., Interview—by N. S. Gallison 254
†Harbord, Genl. James G., Optimistic as to Future of Radio Industry 241
Hardware & Implement Dealers' Assn., Ore., Convention, Portland 231
Hearings on Calif. Interests, Interstate Commerce Comm. 269
Heat, Elec., Opportunity in Foreign Markets 205
Heating, Elec.—
Discussed Before League, S. F. 345
*For Schools-Offices 301
†Should Not be Unwisely Discouraged 42
Heating, Elec. House, Impractical and Uneconomical—by A. C. McMicken 46
Heating, Industrial Elec.—by Criddle and Sievers 416
Heating, Water and Air, Analysis of Data—by J. W. Wrenn 413
Heating Homes by Electricity—Takes Issue on Subject—by W. F. Burrell 243
*Heating Installation Advertises Dealer, Election 23
Heating School, Indus., in Boston 340
†Heating Specialist Holds that Home of Future Will be Heated Electrically 478
Heavy Draft Horses Are for Rent at 16c a Day 58
Hendrie & Bolthoff Steam-elec. Plant Nearing Completion 111
Herr, E. M., Visits West 390
Hetch Hetchy—
Dam Named O'Shaughnessy 267
Generators Shipped by Manufacturer 391
*Moccasin Creek Plant Progressing 227
Transm. Line Equip. Purchase Halted, S. F. 188
Highway Lighting Installation Being Tried in Utah 341
Hold Commerce Figures Do Not Represent True Measure for Diff. Ports—by Albert E. Greene 168

Page

Holt Mfg. Co., Stockton, Calif.—
*Arrangement of Equipment 59
Home Builder—
*Selling Elec. Outlets to —by D. E. Harris 105
†Educate to Demand Quality Installations 126
Home Bldr. Min. & Dev. Co. to Dev. Pwr. 30
†Home of Future Will Be Heated Electrically, Specialist Holds 478
*Home Wiring 332, 378, 460, 494
Homes, Electl. (See Electl. Homes).
Homes, 30,000, to be Add. in 1923, So. Calif. Ed. Co. 340
Homes Wired, Record for U. S., Johnstown, Colo. 343
Hood River Hydroelec. Plant Dedicated, May 10 388
Hood River Plant Ready for Operation About May 15 340
Hood River Plant Will be Ready to Operate by March 27
Horsepower—Draft Horses for Rent at 16c a Day 58
*Horsepower, More Than a Million—by Geo. C. Tenney 245
Horses, Draft, for Rent at 16c a Day 58
House Heating, Elec., Impractical and Uneconomical—by A. C. McMicken 46
*Housewife—Teaching to Cook Electrically—by Ray W. Trumbull 171
How High is Your Stack?—by Joe Osier 185
How Many Elec. Men are Elec. Users? 258
†Human Effort—Indus. Necessity Makes Rerouting Necessary 279
†Hydraulic Laboratory, Natl., Need of Establishment 165
Hydro Progress in Utah 128
Hydro. Projects, Calif. Leads in 45
Hydroelectric Central Station, Aspen, Colo., in 1885—by C. E. Doolittle 169
*Hydroelectiric Develop.—Castles in the Air 84
*Hydroelectric Develop. in the West, 34 Yrs. of—by N. S. Gallinson 91
Hydroelectric Develop. Plans Approved by Commission 228
†Hydroelectric Develop. Presages Continued Prosperity in West 203
Hydroelectric Develop. Program Involves 185,500 Kw., 1923 96
Hydroelectric League, Ore., Annual Meeting 115
Hydroelectric Plant, Mystic Lake, Work Starting 191
Hydroelectric Plants—
†Chronological Tabulation, Western 81
Corrections in Listing—by A. T. Parsons 168
First Polyphase, Thirtieth Anniversary 82
†Hydroelectric Power—Another Milestone Passed 353
Hydroelec. Power, Ore. Men Apply for Water for 388
†Hydroelectric Power Systems, Calif., Document Issued 478
†Hydroelectric Production, Calif. Leading State 43
Hydroelectric Project Planned, Sacramento 266
Hydroelectric Projects Under Way in 1922 or Definitely Scheduled for 1923, Western 97
†Hydroelectric Systems—Map Has Wide Application 241

I

Idaho—
Farm Users of Electricity to Receive Rebate 68
Mascot Mines Power Plant in Operation 26
New Valuation of Power Co. 67
Idaho Power Company—
Applies for Transm. Line Permit 114
Commission Sets New Valuation 67
Elec. Store in New Location 389
Final Rate Hearing, April 30 302
Transformers Installed 68
Will Issue $3,200,000 in Bonds 340
Illumination, Billboard—Elec. Signs and—by Paul D. Howse and Tracy Simpson 407
*Illumination, Church, Develop Demand for 462
Illumination, Need for Better—by C. O. Martin 406
†Immediate Need Exists for Study of Distribution Costs 42
†Immigration and the Labor Shortage 315
*Importance of Neatness in Indus. Elec. Applications 294
Important Income Tax Regulations Are Announced 5
Improvement in Street Lighting, Idaho Falls, Idaho 191
†Improvement Shown in Street Lighting During Past Year 165
Improvements, Extensive, Mtn. States Pwr. Co. 228
Impulse Wheel Shipped to P. G. & E. 303

Page

Income Tax Regulations Announced..... 4
Increase in Elec. Rates is Granted Municipal Plant..... 113
†Increasing Interest Being Shown in Ethics of Engineering Profession..... 202
Increasing Man-Power Urged in Weekly Sales Letter..... 149
*Increasing Sales 27 per cent by Use of Window Displays—by John W. Otterson 136
Index for Vol. 50 Ready, J. of E. & W. I..... 506
Index to Journal of Electricity Ready.... 67
†Individual Enterprise and Socialism — Regulation Only Bulwark..... 80
Inductive Co-ordination, Progress Toward—by J. E. Woodbridge..... 419
Industrial Activities Cause Increase in Power Resources, Byllesby Reports..... 389
*Industrial Applications of Electric Arc Welding Apparatus..... 18
Industrial Electric Heating—by Criddle and Sievers..... 416
Industrial Heating School Will be Held in Boston..... 340
†Industrial Necessity Makes Re-routing of Human Effort Necessary..... 279
Industrial News..... 26, 66, 110, 150, 188, 226, 264, 302, *340, *386, *464, *502
†Industry, Elec. Light and Power, Now Among Largest in Nation..... 355
Industry, Electrical, Outlook in West, 1923 100
†Industry—Mutual Obligations Should Not be Disregarded..... 43
†Inflation—Business Barometers Indicate Approaching Period of..... 240
Inland Power & Lt. Co. Incorporates..... 469
*Install Elec. Appliances for Domestic Science Classes..... 69
Installation and Oper. of Underground Systems—by E. R. Northmore..... 426
*Installing the Display in the Shallow Show Window..... 497
†Installment Plan, Wise Dealer Recognizes Value of..... 278
Insulator Factory Contract Let, Emeryville 110
*Insuring the Growth of Portland—by W. C. Heston..... 9
†Integrity of Federal Power Act Should be Preserved..... 81
Interconnected System Map Has Wide Application 241
*Interconnected Transmission Systems, Pac. Coast Superpower Zone..... 99
Interstate Commerce Comm. Hearings, S. F..... 269
Interview with Genl. J. G. Harbord, An —by N. S. Gallison..... 254
Investigation of Rapids to be Celebrated at Banquet..... 306
Investigation to be Made of Columbia River Project..... 264
Iron Deposits, Utah—R. R. to Tap..... 191
Irrigation and Pwr. Plant Planned, No. Calif. 264

J

Jacobson, H. Arthur, Purchases 1st Elec. Home, Denver, Colo..... 192
Japan—
Securing Plans for Elec. Homes..... 454
Steam Plant Equipment for..... 281
Jarbridge, Nev.—
Nev. Power Co. to Supply Power..... 152
Jobber — Financial Relations with His Customers—by S. B. Anderson..... 175
*Jobber, Dealer and Sales Agent..... *20, 60, 105, 144, 182, 220, 258, 296, *335, *380, *462, *496
Jobber's Direct-by-Mail Advertising, Elec. by John T. Bartlett..... 224
Jobbers, Pacific Coast Supply, Hold Quarterly Meeting..... 155
Jobbing Firms Consolidate, S. F..... 342
Johnson Valve Patent Suit Decision..... 304
Johnstown, Colo., Has Record for Homes Wired 343
Joint Meeting, A.I.E.E. and N.E.L.A., Portland 231
Journal of Electricity & W. I.—
Index for Vol. 50 Ready..... 506
Its Function in the Elec. Industry.... 2
*June Bride Week Campaign, Plans Perfected 335

K

Kamas, Utah, Complains of Power Rates 386
Kelso, Wash.—
Cowlitz Bridge Collapses..... 111
Kettle Falls Plant Cons. to Start..... 227
Kettle Falls Plant to be First Columbia River Project..... 266
Kings River Project Started..... 113
*Kitchen Owners Shown Utility of Heavy Appliances 108
Klamath Falls, Ore.—Canals for Sale..... 226

L

†Labor Shortage, Immigration and..... 315
Laboratory—
Testing, Underwriters Will Open in West 226
†Underwriters, to be Established on Pac. Coast..... 202
Million-Volt to be Completed by March 150
*Million-Volt Will Serve as Experimental Station..... 217
Laguna-Bell Station Starts Cons. Program 112
Lahontan Power Plant Lease Approved.. 69
*Lake Cushman Power Develop., Officials Take Snowshoe Trip to Watershed..... 341
Lamp Dealer, Elec., U. S. as Aid..... 107
*Large Electrical Installation in Seattle Apartment 262
Large Electrification Contract Let by Eastern Railway..... 389
Large Transformer Order Placed by California Co..... 265
Lead Mill Capacity to be Doubled, Utah-Apex Co..... 188
League of Southwest Discusses Colo. River Projects..... 502
Let Convention Delegate Report to the Entire Local Sectn. Membership—by L. N. Robinson..... 6
Leviathan Electrically Equipped..... 45
Lewis River Light & Power Co. Acquired by No. Coast Power Co..... 114
†License Bill, Proposed Engineering, Live Issue in California..... 202
Lien Law, Mechanics', L. A. Atty. Prepares 463
Light, Elec., Poultry Indus. Offers Use.... 204
†Light and Power Industry Now Among Largest in Nation..... 355
Light Plant, Destroyed by Fire, Alexander, Idaho..... 192
Lighting—
Office Bldg. and Flood—by Chas. T. Phillips 411
Progress Made, 1922..... 4
Rates, Seattle Plans Reductions..... 340
Residence, Business Possibilities—by R. S. Prussia..... 409
Retail Stores—by R. S. Prussia..... 410
†Schools Plan Better..... 317
Show Window, Value of Better—by Clark Baker..... 411
Street, Bureau Plans Study..... 166
†Street, Improvement Shown..... 165
Street, Seattle Planning More Complete 342
*Street and Highway..... 55
*Window, Offering the Merchant Better 186
Lighting and Power Rates Reduced, Seattle 467
Lighting Installation, Highway, Tried, Utah 341
List of Directors' Nominees Announced by A.I.E.E..... 267
Local Utilities to be Taxed by Utah County Assessors..... 68
*Locating the Elec. Contr.-Dealer's Store.. 259
Locomotives, Elec.—
Denver Co. Builds..... 191
Los Angeles Orders..... 305
Logan, Utah—
Report Discourages Municipal Water Plant 465
To Improve Muni. Light Plant..... 389
Logging Road, Elec., Started..... 67
Long Beach, Calif.—
Elec. Home Displayed..... 380
*Marsh Elec. Co. Window Display..... 225
Power Co. to Install Substation..... 114
Long-Bell Lumber Co.—
Awards Contract for Power Plant..... 305
Orders Equipment for Power Plant.. 340
Los Angeles, Calif.—
Bond Issue Fails to Pass..... 502
Denied Rehearing in Condemnation Proceedings 192
Electric Club Celebrates..... 115
Elec. Club Celebrates Annivers. 1st Polyphase Hydro Plant..... 82
Electric Club Makes Orphans Happy 71
Elec. Club Sees Contr.-Dir. Play..... 192
Elec. Club Sees Portable Show Window Display..... 231
Elec. Contr.-Dealer's Ball..... 115
Elec. Men Call New Officers to Duty 193
Ford Plant Will be Largest..... 113
*Grauman's Metropolitan Theater..... 131
Needle Valve for San Francisquito Plant 302
Opposition to Bond Issue..... 464
Power Application Suspended..... 114
*Public Officials Guests of Electric Club 70
R. R. Comm. Applies for Rehearing in Terminal Cases..... 26
Regional Meeting, Am. Soc. M. E.... 307
Subway Planned, Pacific Elec..... 302
†Supreme Court Decision..... 400
Los Angeles Attorney Prepares Mechanics' Lien Form..... 463
Los Angeles Chapter, A.I.E.E., Visit Laguna Bell..... 469

Page

Los Angeles Gas & Electric Co.—Old Guard Honored..... 151
Los Angeles Ry. Company—Will Build Own Street Cars..... 153
Los Angeles Railway Orders 10 Elec. Locomotives 305
Loveland, Colo.—
Electric Home..... 64
*Electric Home Displayed..... 389
Lumber Company Buys Large Block of Calif. Timber..... 70
Lumber Company Places Contract for Large Power House..... 305
Lumber Co. Water Rights in Shasta County Sold..... 230
Lumber Co., Willaps, Electrifies Plant.... 342
Lumber Industry, 1923 Promises Prosperity 45
†Lure of the White Collar Job, The..... 202

M

Machinery—Asiatic Market is Expanding 129
†Machinery Exports to Asia Increase Seven Fold in Past Five Years..... 203
*Magnets—Fitting Elec. Lift to Needs of Indus. User..... 142
Mail Advertising, Elec. Jobber's Direct, by John T. Bartlett..... 224
Maintenance and Test. of Elec. Meters—by W. H. Talbott..... 446
Majestic Co. Announces Reorganization.. 506
Major Blauvet Named Colo. State Highway Engineer..... 30
*Make It Easy for Prospects to Become Customers 298
†Make Toast Your Breakfast Food—Campaign of Bakers Assn..... 400
*Making the Electrical Sticker Most Productive 260
†Making the Show Windows Ring the Cash Register..... 127
Man-Power, Increasing Urged in Sales Letter 149
*Manufacturer, Dealer and Jobber Activities..... 34, 74, 118, 158, 196, 234, 272, 310, 348, 394, 472, 510
Manufacturers, Cleaner—Plea to Play Fair with Humble Broom—by D. Arbaugh 169
*Manufacturer's Window Displays..... 63
†Manufacturers are Accorded New Rights Under Current Tariff Act..... 80
Manufacturing Executives Visit Western Cities 390
Many Meetings Held to Discuss Check Seal Program..... 112
Many Problems Confront Chinese Engineers 5
†Map of Interconnected System Has Wide Application 241
*Marines Keep Bakery Clean Through Use of Electricity..... 58
Marion Lake Power Poss. Told Salem Men 302
Market for Elec. Goods, Australia..... 281
*Market in the West, $37,000,000..... 93
Market St. Ry., S. F.—
Orders Converter Equipment..... 464
*Uses Stk. St. Car Parts for Compressor Control..... 256
Market Terminal Plans Announced..... 229
*Marsh Elec. Co., Long Beach, Window Display 225
Marshfield, Ore.—
Coos Bay Lumber Co. Improvements.. 340
Mayor of Denver Pub. Ownership Candidate 467
McKay Dam, Elec. Shovels Authorized.... 390
Mechanics' Lien Law, L. A. Atty. Prepares 463
*Medal, Coffin, Awarded So. Cal. Ed. Co... 503
Meeting, Annual, of Eng. Council of Utah Held..... 390
Meetings..... 31, 71, 115, 154, 193, 231, 307, 345, 391, *469, *507
Melbourne, Australia, Will Display Appliances 357
Members of Engineering Council of Utah Elect Officers..... 226
Merchandising — Yes: Job Buying — No —by Joe Osier..... 259
Merchandising Aid Offered by Mfg. Company 25
Merchandising and Credits Discussed..... 468
*Merchandising Electric Ranges—by A. H. Nicoll and Herbert Cram..... 403
*Merchandising Figure of the Dealer, Electrifying 297
Merchants, Educate Both Electrical and Non-Electrical—by S. W. Bishop..... 7
†Merited Recognition of a Western Scientist and Engineer..... 3
*Metal Foundry, Western—Elec. Furnace in 143
*Meter, 75,000th, Installed in Denver..... 113
Meters, Elec., Test. and Maintenance—by W. H. Talbott..... 446
Midland Counties Public Service Corp.—Transmission Line Completed..... 30
*Midway Plant—
Buttonwillow 282
*San Joaquin Light & Power Corp.—by E. A. Quinn..... 288

Midwinter Social Meeting, Portland Sections, A.I.E.E. and N.E.L.A. 115
†Milestone, Another Passed 353
*Miller, John B., Given Service Button 153
†Millikan, Dr. Robt. A.—Merited Recognition 3
Million-Volt Laboratory—
To be Completed by March 150
*Will Serve as Experimental Station, New 217
*Miner, Central Sta. Service for 257
*Miner's Inches, Changing to Kw.-Hr.—by Geo. C. Tenney 49
Mines, Calif., Show Record Output, 1922 82
Mining Co. is to Increase Power Plant Capacity 26
Mining Co., Utah-Apex, to Double Capacity 188
Mining Exposition Planned, Salt Lake 267
*Moccasin Creek Plant Progressing Rapidly 227
Moccasin Creek Wire Contract Let 110
*Mock Trial Reveals Advantages of Elec. Washer 221
*Modern Autom. Machinery Aids in Manufacture of Crossarms 287
Modern Electric Equipment on New U. S. Vessel 45
*Modern Elec. Installation in Plant of Nevada Gypsum Co. 218
Modesto Irrigation District—
Bids to be Opened 302
To Own Power Lines 305
Modesto-Turlock Transm. Line Lease Signed 189
Moffat Tunnel—
Colo. Pwr. Co. Will Provide Energy 226
Contract Not Let 266
Mono Power Company—Court Denies L. A. Rehearing in Condemnation Proceedings 192
Montana—
Elec. R. R. to be Built from Columbus 190
Utilities May be Taxed on Receipts 188
Montana Power Co.—
Mystic Lake Turbines Ordered 502
Mystic Lake Work Starting 191
Power Line to Dillon 30
Rate Reduction Offer Made 506
Moravia Light & Power Co.—Organized 306
†More Adventures in Goodwill Are Needed in Public Utility Field 3
*More Than a Million Horsepower—by George C. Tenney 245
†Motto is Suggested for Enterprising Contractor, A 479
Mountain Division, Assn. of Electragists, Convention, Denver 466
Mountain States Power Company—Extensive Improvements 228
Mountain States Tel. & Tel. Co. To Have Telephone Party 307
*Mt. Hood, Putting the Snows to Work—Lewis A. McArthur 483
Mt. Shasta Power Co. Acquires Water Rights 230
Mt. Whitney Power & Elec. Co. Seeks Permit for Franchise 151
†Much Needed Revision of National Electric Code 240
†Municipal Ownership to be Issue in Denver City Elections 164
†Municipal Electric Plants—Wash. Bill Would Permit to Oper. Beyond Munic. Limits 80
Municipal Ownership is Waning 480
Municipal Power Sales Measure Before State Law Makers 150
Municipal Railway, Seattle, Returns to 5c Fare 229
Municipal Water Plant, Report Discourages, Logan, Utah 465
Murray City Corp. To Increase Output 29
†Mutual Obligations in Industry Should Not Be Disregarded 43
Mystic Lake Plant—
Turbines Ordered 502
Work Will Start Immediately 191

N

N.E.L.A.—
Comm. and Wir. Sectns. Meet, Denver 115
*Convention, Denver 140
Industrial Heat. School, Boston 340
Joint Meet. with A.I.E.E., Ptld 231
Portland, Addressed by Reed College Men 307
Portland Sectn. Midwinter Meet 115
Program Announced for June Convention 391
Reflections from Denver Meeting 154
Registration, Denver Meeting 154
Reports (See Convention Papers).
To Study Central Station Radio Situation 5
Transportation Committee to Convention Named 307
National Commission Favored to Regulate Broadcasting 152
National Elec. Safety Code—
Change Recommended 264
Much Needed Revision 240
Parts Adopted by Ore. Comm 188
National Electric Supply Jobbers Assn., Meeting, Del Monte, Pac. Div 155
†National Fire Protection Assn.—Needed Revision of Code 240
†National Hydraulic Laboratory, Need of Establishment 165
†National Radio Chamber of Commerce—Reorganization is Effected 127
National Superpower Survey is Subject of New Book 503
*Neatness in Indus. Elec. Applications 294
†Necessity, Indus., Makes Rerouting of Human Effort Necessary 279
†Need of Establishment of National Hydraulic Laboratory 165
Needle Valve Shipped to L. A. by Pelton Co. 302
Nelson, B. C., May Sell Power to Florence Mining Co. 386
NePage-McKenny Co. Will Build Seattle Transmission Line 343
Nephi City, Utah, Power Plant Regulations Changed 110
Nettleton Power Co. to Develop Power 111
Nevada—New R. R. Would Open Land 356
Nevada Power Company Applies for Transmission Line License 152
Nevada Valleys Power Company—
Gets Lease on Generating Plant 69
Power Contract Approved 150
New Broadcasting Station Will be Erected in Denver 192
New Contract Form Prepared for Elec. Men 146
*New Cornelia Copper Co. Mill Elec. Driven 180
New Elec. Club is Organized by Cheyenne, Wyo. 391
New Financing Co. Formed to Handle Western Business 303
New Idaho Power Plant is Put in Operation at Mine 26
New Line Extension Rules Made in State of Washington 110
New Line Will Serve Sawmills in Chiloquin District 190
New Member Appointed to Utah Utilities Commission 268
New Mexico—
New Generating Plant, Artesia 30
New Mexico Elec. Assn.—
Convention 193
Meeting, Albuquerque 115
New Railroad to Tap Rich Iron Deposits is Authorized, Utah 191
New Railroad Would Open Nevada Land 356
New Record for Bldg. Activity, 1922 280
*New Spanish Type Elec. Home in El Paso 222
New Valuation Placed on Idaho Co. by Comm. 67
New Washington Rate Schedule Has Been Filed 28
New Year Resolutions, Some Snappy—by Joe Osier 23
North Coast Power Company—
Acquires Lewis Riv. L. & P. Co. 114
Purchased by Puget Sound Power & Lt. Co. 152
Northern California Irrig. and Pwr. Plant Planned 264
Northwest Elec. L. & P. Assn.—
Convention, June 27 505
Convention Scheduled, Seattle 231
Convention Date Set, Seattle 193
Northwestern Electric Co.—
Lays Foundation for Plant 340
Lays Submarine Cable 467
Orders Turbo-Generator 113
*Steam-Elec. Plant Started 265
Substation, Vancouver, Wash 228
Will Build Trans. Lines 342
Northwestern Redwood Co. to Sell Distrib. System 231

O

Oak Grove Project—
Contract for Valves Let 306
Equipment Ordered for First Unit 27
Oakland, Calif.—
*Apartment Electrical, The 283
Elec. Club Addressed by J. D. Houser 192
Genl. Elec. First Unit Completed 268
Traction Co. Orders 55 Cars 67
Observations on Operation of Power Transformers—by G. M. Willis 425
Obituary—
Brown, L. L. 233
Brown, Walter F. 195
Burgess, Chas. Preston 347
Kilbourne, Chas. A. 471
Kivel, Frank 73
Lindsley, Chas. Perry 73
McDonnell, C. B. 393
Moorhead, Otis B. 195
Russell, Frank E. 471
Starr, Rex C. 393
Wheeler, Dr. Schuyler Skaats 471
October Elec. Exports from U. S. 57
*Offering the Merchant Better Window Lighting 186
Office Bldg. and Flood Lighting—by Chas. T. Phillips 411
Officers for New Year Elected by Seattle Engineers 506
*Officials of Radio Corp. Visit Pacific Coast 266
Ogden, Utah—
A.A.E. Committees Named 227
School Installs Elec. Appliances 69
Ogden and Salt Lake City Offered Rights of Gt. Basin Pwr. Co. 231
*Oil Circuit Breaker Develop.—by H. Michener 427
*Oil Derrick, Elec. Operated, Point Firman 176
Oil Electrically Lifted 59
*Oil Temperature of Distrib. Transf.—Effects of Colored Cases—by Moore and Moulton 433
Olympic Hotel Archts. Drawing, Seatt'e 268
One Act Play Gives Advice to Elec. Salesmen 225
One State Has Not Ratified Colo. River Compact 150
Operating Costs of an Elec. Home—by H. L. Garbutt 330
*Opportunities for the Central Station in Electric Vehicles—by A. M. Frost and H. E. Sandoval 420
Opportunity for Elec. Heat. in Foreign Markets 205
*Order Blank for Switch Boxes Aid to Contractor 262
Ordway, Crowley and Sugar City Have Elec. Cook. Schools 466
Oregon—
Hydroelec. League Meeting 115
Professor Holds Elec. Heating Impractical and Uneconomical—by A. C. McMicken 46
Pub. Service Comm. Adopts Parts of Natl. Code 188
Oregon Electric Company—
*Radio Reopens Communication After Storm 128
Oregon Men Place Applications to Use Water for Power 388
Oregon Power Companies Plan Interconnection 26
Oregon Power Company Bought by Stone and Webster 152
Oregon Power Company Starts Transmission Line Work 386
Oregon Retail Hardware and Implement Dealers' Assn., Convention, Ptld 231
Organization Opposes L. A. Bond Issue 464
*Ornamental Street Lamp Installations, Stimulate Demand for 177
O'Shaughnessy Dam Named 267
†Our New Dept. Devoted to Elec. Cons 316
*Outlets, Elec., Selling to Home Builder by D. E. Harris 105
Outlook for Elec. Contr.-Dealer for Coming Year—by E. E. Browne 169
Outlook for Electrical Industry in West for 1923 100
*Oven, Elec., Applications in Auto Indus 295
Overhead Transm. Systems—Develop.—by J. A. Koontz *444

P

Pacific Coast Convention—
Plans Have Been Announced 268
Plans to be Made in April 231
Pacific Coast Electrical Assn.—
†Combine Business with Pleasure 354
Commercial Comm. Meet., Fresno 230
Convention Plans Announced 268
Convention Program, S. F. *459
Convention Scheduled, S. F. 115
Exec. Comm. Meet. L. A. 231
Meeting, Fresno 307
Program for S. F. Convention 504
†Recording Yr. of Elect. Progress 399
Reports for Convention Considered, Fresno 229
*Truck Parade to be Held, S. F. 505
Pacific Coast Electrical Jobbers Assn.—Convention, Del Monte, May '23 468
Merchandising and Credits Discussed 468
Pacific Coast Group Tech. Committees Hold Meeting 307
Pacific Coast Ports Handle Large Tonnage 4
*Pacific Coast Steel Co.—Open Hearth Steel Furnace 206
*Pacific Coast Superpower Zone 98
Pacific Coast Supply Jobbers Hold Quarterly Meeting 155
Pacific Division, Elec. Sup. Job. Assn., Meeting, Del Monte 115
Pacific Electric Railway Co.—
Electric Locomotives Ordered 305
Plans Subway 302
Pacific Gas & Electric Co.—
Annual Report Broadcasted 306
Auto is Factor in Service 166
Buys Control of Utility 229
Directed Wireless System of Dispatching 319
Given New Rate Base 68
Impulse Wheel from Pelton Co. 303
Permitted to Transfer Properties 67
Pipe Line 20 Yr. Old in Good Shape 192
Pit No. 3 Cons. to Start 226

Page

To Sell Power to Sierra Pac. Elec. Co. ... 387
Transm. Line over Sierra Nevadas.... 228
Will Improve Drum System ... 264
*Pacific Northwest, Super-Power Survey, ... 316, 321
Pacific Northwest Branch, Assoc. Genl. Contrs. Holds Convention, Seattle ... 193
Pacific Northwest Traction Co. Plans Extensions ... 268
*Pacific Northwest Water Possibilities ... 320
*Pacific Portland Cement Co., Elec. Installation in Gypsum Plant ... 218
Pacific Power and Light Company—
Hood River Plant Dedicated ... 388
Hood River Plant Ready by March.... 27
Hood River Plant to be Ready May, 15th ... 340
Power Plant Nearing Completion ... 68
*Powerdale Plant ... 483
*Powerdale Plant to be Dedicated ... 465
Umatilla County Develop ... 69
Pacific States Electric Co.—
Distributors for Chance Anchors, S. F. ... 506
†To Continue Check Seal Campaign.... 81
Pacific Tel. & Tel. Co. Acquires Property, The Dalles, Ore. ... 229
Palouse District, Wash., Duplicate Light and Power Service ... 151
*Parade, Elec. Truck, in S. F. ... 505
Parowan City Plans Develop. of Hydro-Elec. Power ... 111
Parts of National Code Adopted by Ore. Commission ... 188
Pasadena, Calif.—
Plans to Erect Substation ... 111
Patents and Trade Marks, Booklets on.... 303
Pelton Water Wheel Co.—
Ships Impulse Wheel to P. G. & E.... 303
Ships Needle Valve ... 302
To Erect Bldg. ... 467
Permission Given for Erection of Two Power Houses ... 111
Permit Given for Diamond Creek Power Development Dam ... 66
Permit Petition Conflicts with Earlier Request ... 266
Permit Sought for Utah Power Development Project ... 30
*Personals ... 32, 72, 116, 156, 194, 232, 270, 308, 346, 392, 470, 508
Aaron, P. J., 156; Affolter, P. H., 346; Airey, Frank J., 156; Alden, W. A., 116, 508; Allen, H. W., 156, 393; Anderson, C. S., 471; Anderson, Roy L., 508; Andrew, Edwin L., 270; Argabrite, H. H., 393; Arnold, Joseph P., 72, 73; Ashworth, Paul P., 270; Aunger, W. H., 470; Averill, F. N., 157.
Bacon, E. P., 117; Baer, M. D., 308; Bailey, George, 156; Baker, Ira Osborn, 156; Balzari, R. A., *195; Banning, Thomas E., 195, 347; Barfoed, S., 157; Bargion, H. L., 156; Barker, Geo. T., 308; Barker, G. W., 72; Barkhuff, W. D., 33; Barnhill, J. B., 347; Barrett, W. E., 232; Barry, J. M., 393; Bastian, H. S., *393; Batcheller, Willis T., 392; Baum, F. G., 157; Baxter, George E., 392; Bernhard, George W., 72; Berresford, A. W., 157; Betts, Hobart D., 393; Bilica, H. J., 33; Bishop, S. W., 33, 117, 194, 271; Bixler, George W., *117, 270, 508; Blackburn, L. A., 116, 393; Blaisdell, Jerome, 194; *Bleak, R. M., 157; Bliven, H. W., 33; Board, V. L., 32, 117, 308, 508; Bonner, James H., 346; Booth, P. H., 156, 509; Boring, George, 156; Bowerman, J. W., 72; Bowie, C. P., 117; Boyd, F. E., 271; Bradner, E. A., *308; Brazier, E. E., 471; Briggs, Frank N., 194; Brooke, T. A., 233; Brown, Fred, 308; 347; Brown, L. R., 308; Buck, F. W., 32; Burger, T. E., 117; Burgess, Carl L., 116; Burr, Wm. Hubert, 270; Burt, C. C., 270; Busey, J. L., 156; Bush, Eli F., *508; Buswell, J. M., 309; Butz, Herbert R., 392; Byllesby, H. M., 393; Byrne, Harry, 471; Byrne, P. Harry, 157.
Cahn, Henry, 157, 194; Calloway, A. J., 156; Campbell, Geo. A., 470; Campbell, W. W., 156; Canavan, J. Jerome, 271, 347; Cannon, H. B., 470, 509; Cargo, L. M., 270; Carpenter, E. E., *509; Carroll, Fred C., 471; Carter, E. A., 270; Carter, J. B., 471; Case, J. O., 156, *392; Catlin, Hoyt, 271; Challoner, G. F., 392; Chamblin, Clyde L., 33; Chase, Samuel A., 156; Clark, C. M., 471; Clark, Dean D., 195, 271; Coblentz, R. W., 471; Cole, H. A., 346; Collier, J. R., 308; Colwell, J. I., 156, 509; Conlon, Walter J., 508; Conrad, E. S., 471; Cook, Geo. B., 347; Coombs, H. W., 471; Cooper, John J., 72; Copley, A. W., 393; Corey, H. H., 73; Corfman, Judge E. E., 157; Cornell, A. C., 72, 233; Courtright, C. C., 156; Crain, H. D., 509; Crane, W. D., 309; Cranston, T. A., 194; Crawford, P. O., 194, *270; Crawford, Wm. H., *346; Creed, W. E., 346; Criddle, E. B., 346, 393, *470; Crocker, E. R., 347; Cross, Kenneth M., 233; Cullinan, G. E., 309; Curtin, J. M., 393; Curtiss, Geo. H., *271; Cutting, E. M., 271.
Dana, Arthur D., 309; Daugherty, Frank A., 309; Daugherty, J. E., 309; Davidson, J. C., 233; Davis, A. P., 347; Davis, D. W., 347; Davis, E. C., 309; Davis, L. W., 156; Davis, W. H., 309; Deering, J. R., 116; Degen, Lewis, 270; Del Valle, R. F., 271; Dodge, Walter J., 309; Dollar, C. Melville, 271; Dolson, Fred O., 346; Dostal, J. F., 116, 270; Dunmire, A. L., 72; *Dunn, Charles P., 156; Dyett, H. T., 270.
Easton, Frank A., 347; Eckley, W. S., 308; Eernisse, J. G., 346; Egeler, G. F., 470; Ellis, R. G., 470; Eltringham, R. L., 117; Emmons, C. E., 470.
Fagan, Frank D., *471; Fall, Secretary Albert B., 73; Faude, F. M., 309; Feiker, F. M., *309; Fewel, Edward 392; Fiester, Jack, 157; Finely, W. C., 509; Fisher, R. E., 232; Fischer, J., 157, 470; Flannigan, George, 73; Fletcher, A. B., 194; Foote, D. H., *195; Foreman, James J., 392; Francis, A. J., 33; Freeman, John R., 32; Frost, A. M., 156; Fuller, Dr. L. F., *116; Fullman, V. G., 509.
Galbraith, L. F., 308; Gentry, R. G., 117, 508; George H. C., 157; Gibson, Will H., 232; Gille, H. J., 232; Gilson, Rosse M., 271; Goddard, R. W., 271; Goethals, Major John C., 32, 471; Goldrick, Harry C., 156; Goward, A. T., 232; Grahame, Mrs. Helen, 195; Greenawalt, John F., 117, 233; Griffin, H. K., 194; Griffin, W. H., 508; Griffith, Franklin T., 32, 157; Groesbeck, C. E., 271; Gronen, Hamilton F., 195; Grunsky, Clotilde, 72; Gundlach, H. J., 508; Gute, H. G., 117.
Hall, C. B., 156; Hamel, R. H., 271; Hamilton, Stacy, 271; Hancock, John W., 117, 157; Harley, Dan, 509; Harper, Harry L., 33, 156, 393; Hartley, Ross, 471; Harvey, N. C., 271; Hawley, C. B., 156; Hayashi, Yashuhige, 73; Hazard, Fred E., 72, 508; Headrick, E. C., *194, 271; Heintz, Carl M., 116, 232; Hellenthal Jos., 308; Hendrick, R. M., 470; Henock, M. H., 32, 393; Herr, E. M., 392; Heywood, Judge A. R., 116, 157; Hibbard, H. Alex., 157, 470; Hickman, H. H., 72; Higson, C. R., *508; Hill, E. W., 470; Hillebrand, W. A., 73; Hillis, C. C., 232; Hinckley, A. A., 116; Hobrecht, J. C., 72; Hodge, W. H., 194; Hodgson, G. E., 233; Hodgson, W. S., 346; Hoeftmann, W. O., 73; Holabird, Harry G., 470; Holloway, A. E., 471; Holmes, Charles C., 509; Holmes, Chas. P., 470; Holst, B. C., 72; Hone, Chas. A., 309; Hooper, D. W., 232; Hooper, M. L., 232; Hopkins, R. A., 346; Hughes, Harry, 117; Hunt, Marsden H., 308; Hutchinson, Ely C., 508; Hyde, Dr. Edward P., 392.
Isaacs, John D. ... 509
Jackson, A. M., 392; Jackson, Carl D., 116; Jackson, Ray P., *308; Jamison, J. H., 156; Janssen, A. E., 470; Jeffrey, Dr. J. A., 117; Johnson, Chas. E., 157; Johnson, F. E., Jr., 509; Johnson, F. F., 470; Johnson, L. B., 471; Johnston, J. F., 270; Jones, H. H., 470; Jones, J. C., 72, 346; Jones, Paul R., 72; Jones, R. H., 346; Joubert, Lloyd, 346.
Kahn, J. A., 156, *347; Kahn, Samuel, 194; Kassler, E. S., 308; Keating, W. J., 157; Keeler, Clarence, 157; Kelvey, O. J., 270; Kemp, A. N., *117; Kempston, Arthur, *471; Kennedy, S. M., 232; Kennedy, T. O., 32; King, E. D., 32; King, R. B., 308, 470; Kirker, G. B., 346; Kissick, K. W., 157; Klauber, L. M., 470; Kleinschmidt, H. S., 270; Kline, J. L., 156; Knost, J. H., 271; Kramer, Elbert, 270; Krilly, J. E., 509; Kuse, James W., 233.
Laird, Kenneth V., 270; LaMarsna, G. C., 156, 347; LaMoree, C. D., 33; Landes, Dr. Henry, 32; Lane, H. E., 72; Lang, Edmund, 271; Lanning, M. E., 73; Lanthier, R. C., 471; Lanyon, S. Herbert, 508; Lee, Chas. H., 32; Lee, J. Max, 194; Lee, Louis R., 73; Lee, Warren K., 470; Leurey, Louis F., *232; Levinson, Nathan, 346; Lewis, George E., 117, 233, 271; Lewis, W. B., 347; Libbey, Robt. C. W., 232; Lillie, Raymond W., 117; Listenwalter, C. E., 156; Loew, Dr. Edgar, 32; Loiseau, John E., 393; Loveland, Chester H., 309; Lowe, George, 508; Lutz, August J., *347.
Mackey, C. M., 309; Mahon, James L., 117; Mahoney, J. W., 346; Manny, H. H., 471; Markee, E. P., 156; Martin, Carl O., 33, 309; Martin, H. J., 156; Marx, C. D., 509; Masek, J. C., 509; Mayo, H. J., 509; *McArthur, Lewis A., 72; McCammon, F. F., 116, 117, 194, 270; McCarthy, A. L., 392; McClure, D. C., 32, 72, 270; McDonald, W. D., 156; McDonough, Thomas F., 309; McEniry, F. J., 233, 271; McIntyre, Kenneth A., 156; McKenny, V. S., 232; McMicken, A. C., 470; McNair, G. B., *392; McSpadden, S. M. L., 271; Mead, Dr. Elwood, 33; Medearis, G. B. M., 117; Mehren, E. J., 195; Merrick, C. B., 309; Merrill, Z. E., 308; Merrill, Dr. Jos., *233; Merrill, Wm. W., 309; Meyer, A. F., 194; Miller, F. F., 271; Millikan, Dr. Robt. A., *32, 346; Mills, Frederick S., 157; Mitchell, Claude, 232; Mong, Clifford E., 508; Moore, L. J., 156; Moorhead, Jos., 233; Morgan, D. W., 116; *Moser, Walter A., 73; Muffley, Ray Y., 156, *232; Munn, James, 157.
Nanassy, N., 347; Nash, E. J., 32; Ness, T. W., 271; Nicholson, George F., 72; Nightingale, F. P., 308; Noack, H. R., Nollenberger, Theodore, 157; North, H. E., 195; *Nudd, T. L., 72; Nunn, Herbert, 346, 509.
Oakford, Lee M., 32; O'Brien, J. W., 471; O'Brien, Leo J., 508; O'Connell, Jerry, 508; Oehlmann, C. F., 72; Ong, David G., 73; Orr, John D., 308; Ostler, Frank, 347.
Paine, Sidney B., 508; Parker, G. L., 72; Parker, J. H., 471; Pearson, Harry L., *509; Peat, A. E., 470; Peeples, Henry C., 471; Peterson, S. W., 156; Phillips, Chas. T., 471; Pierson, Chas. Heston, *271; Pillars, C. E., 271; Plueger, F. C., 471; Plumb, Hylon T., 194; Pomeroy, J. G., 156, 270, 392; Potts, George, 471; Prager, Arthur, 157; Priest, A. J., 470; Putnam, W. R., *116, 232, 470, 471.
Queen, Geo. O., 271; Quinan, George E., 33.
Ramsay, W. A., 33; Randall, H. D., 72, 508; Rankin, F. J., 470; Read, Ben S., 270; Read, H. W., 72, 117; Read, Norman, 346; Ready, Lester S., *270; Rees, Harry P., 270; Reynolds, L. B., 509; Rhodes, C. I., 309; Rhodes, T. H., 72; Rhodes, Tom A., 117; Rice, Calvin, 346; Rice, Col. George M., 33; Richards, L. C., 194; Riddle, Frank H., 117; Roberts, F. H., 117; Roberts, W. J., 195; Robinson, E. G., 309; Robinson, Dr. Lloyd N., 33; Robinson, Parker M., 470; Rosplock, W. S., 508; Rowley, B. E., 32; Rubincam, R. S., 271; Russell, C. D., 156; Russell, S. P., 271; Ryan, W. D'A., 308.
Saathoff, George W., 157, 308; Sachse, Richard, 73, 117, *233; Sanborn, R. P., 308; Sawyer, W. B., Jr., 393; Schluederberg, Carl G., 72; Scott, E. A., 157; Scott, Tully, 116; Sears, W. C., 271; Seep, A. H., 270; Seitz, Enoch B., 508; Semrad, Charles A., 117; Sessions, Harry, 195; Shade, H. C., 116; Shannon, Charles N., 157; Shenehon, Francis C., 270; Shepard, E. A., 470; Shepard, Frank E., 309; Shepard, W. M., *309; Shreve, E. O., *470; Sibley, Robert, *33, 508; Skill, Roy H., 392; Slocum, H. P., 470; Smith, Bertrand, 393; Smith, F. R., 347; Smith, Richard E., *233; Smith, W. C., 347; Snell, Howard S., 346; Soldini, M. G., 471; Southard, W. P., 116; Southgate, H. M., 32; Sprackling, W. E., 156; *Spring, A. L., 157; Springer, George E., 270; Squires, H. B., 392; Stannard, Clare N., 32, 73, 117, 195, 270, 309, 393, 508; Stannard, J. L., 157; *Stare, Burton R., 156; Stearns, Thomas B., 309; Stenger, E. C., 270; Sterne, W. C., 117; Stone, F. L., 117; Stout, F. M., 72; Stoutnor, Warren, 347; Strandborg, W. P., 157; Strauch, A., 157; Sturgeon, D. D., 73; Swank, Basil, 157; Sweet, William E., *32; Swope, Gerard, 392, 470, 509.
Tait, A. Y., 194; Terrell, C. F., 308; Tewksbury, H. A., 116; Thomas, Chas. S., 309; Thompson, G. R., 117; Thompson, J. C., 32, 508; Thompson, R. E., 157; Tomlinson, J. R., 33; Torpen, B. E., 346; Tracy, R. P., 270; Treat, Robert, 271; Trench, W. W., 117; Tuberger, J. B., 393; Turner, H. W., 156.
Van Diest, E. C., 117; Van Kuran, K. E., 156, *194; Van Law, Durbin, 347; Vanzwell, H. B., 309; Vauclain, Samuel L., 308; Vea, Chas. R., 309.
Walker, H. S., 194; Walker, R. D., 271; Wallace, Wm. T., 470; Walsh, Frank, 308; Walter, R. F., 157; Walton, Stanley, 157; Ward, Clarence T., 116; Wathy, Jesse S., 32; West, A. B., *346; West, Jack, 271, 308; Wheatlake, B. C. J., 233; Whipple, E. C., 271; White, J. L., 146; White, R. M., 471; Whitmore, Carl, 392; *Whittlesey, James T., 73; Wiggin, Charles E., *232; Wilder, Ralph, 117; Will, C. M., 156; Williams, Hugh H., 72; Williams, H.

Page

L., 117; Willson, Walter G., 271; Wilson, A. L., 308; Winegar, F. D., 194; Winfree, F. F., 347; Withrow, J. J., 117; Woodward, F. H., 72; Wooley, A. R., 73; Woolley, Ralf R., 157; Worth, Roy, 156; Wyker, R. R., 157.
Yost, H. F. ... 393
Zinck, Guy ... 309
Petition for Permit Conflicts with Earlier Request ... 266
Petitions Filed for Power and Transm. Projects ... 229
Petroleum Products Specifications Set by Government ... 192
*Pioneering in the Central Station Industry—by John A. Britton ... 85
Pipe Line Laid 20 Yr. Ago in Good Shape ... 192
Pit No. 3 Cons. to Start in 30 Days ... 226
*Placing Electrical Convenience Outlets in Every Room-by Garnett Young ... 207
†Plan Better Lighting in Schools to Save the Eyes of Youth ... 317
Plan to Have Mining Exposition, Salt Lake City ... 267
Planing Mill, Electrified, Material Ordered, Silver Mill Co. ... 189
Plans Announced for Market Terminal, S. F. ... 229
Plans Made for A.S.M.E. Pacific Coast Regional Meeting ... 190
*Plans Perfected for June Bride Week Campaign ... 335
Plans to Double Plant Capac., Canadian Co. ... 264
Play, One-Act, Gives Advice to Elec. Salesmen ... 225
Plea to Cleaner Manufactureres to Play Fair with Humble Broom, A—by D. Arbaugh ... 169
†Pleasing the Public ... 125
Plumas National Forest, Calif.—Timber Sold ... 70
Point Firman Oil Derrick Elec. Oper. ... 176
†Political Ownership Differs from Public Ownership ... 126
†Political Troubles—Diagnosis Discloses Ignorance and Selfishness ... 80
Port of Portland to Purchase Diesel Engines for Dredge ... 111
Portable Window Display—
*Arousing Interest ... 501
Before L. A. Elec. Club ... 231
Portland, Ore.—
*Insuring Growth—by W. C. Heston ... 9
Meeting, A.I.E.E. and N.E.L.A. ... 115
Northwestern Orders Turbo-Gener. ... 113
Port to Purchase Diesel Engines ... 111
To Have New Cooperage Plant ... 30
Portland Power Co. Reports Show Prosperous Year ... 305
Portland Railway, Light and Power Co.—
*Insuring Growth of Portland ... 9
Oak Grove Equipment Ordered ... 27
Oak Grove Valve Contract Let ... 306
Reports Prosperous Year ... 305
To Have Interconn. with Mtn. States Power Co. ... 26
*View of Portland ... 8
Ports, Commerce Figures Do Not Represent True Meas.—by A. E. Greene ... 168
Ports Handle Large Tonnage, Pacific Coast ... 4
Poultry Indus. Offers Use for Elec. Lt. ... 204
†Power—Wash. Bill Would Permit Cities to Sell Beyond Munic. Limits ... 80
Power Applications Are Acted on by Federal Commission ... 150
Power Bill, Reed, Amended ... 227
†Power Company Annual Reports Designed for Consumer Owners ... 355
*Power Co. Communication Developments ... 359
Power Company Employees, Selling Elec. Idea ... 297
Power Co. Orders Turbines for Mystic Lake Plant ... 502
Power Co. to Increase Its Generating Capacity, Tillamook, Ore. ... 30
Power Company Will Seek Permit to Exercise Franchise ... 151
Power Demand in West is Increasing ... 204
Power Development, 6 Applicants Request Water for ... 302
Power Develop. Plans Given Approval by Commission ... 228
Power Earnings and Comparative Public Wealth—by G. B. Herington ... 215
*Power Line is Being Built Over Two Mountain Ranges ... 303
Power Permit Requests Suspended ... 114
Power Plant, Long-Bell Co., Equipment Ordered ... 340
Power Possibilities of Marion Lake Told Salem Men ... 302
†Power Progress, Supreme Court Decision of Importance to ... 400
Power Resources of Snake River, Survey Shows ... 280
Power Sale Measure, Municipal, Before State Law Makers ... 150
Power Sales Show Marked Increase ... 357
†Power Survey, Super., of Pac. N. W. ... 316
†Power Systems, Calif., Valuable Document Issued ... 478

Page

Power Transformers, Observations—by G. M. Wills ... 425
*Powerdale Plant—
By Lewis A. McArthur ... 483
Dedicated by Ore. Co. ... 465
Preliminary Permit Granted to Sou. Cal. Ed. Co. ... 114
Preliminary Permits are Issued by Federal Commission ... 188
Prelim. Surveys for Idaho Plant are Completed ... 303
Prices, Commodity, Compared with Gas and Electric Rates ... 27
*Prime Movers Committee Report ... 370
†Private Initiative, Consumer-Ownership and Pub. Regulation Spell Service ... 278
†Prizes Offered for the Best Paper on Customer-Ownership of Securities ... 279
*Problems in Steam Plant Operation—by E. A. Quinn ... 370
Production, Daily, of Electricity Break Records ... 205
Program for S. F. Convention Announced 504
Program is Announced for June Convention of N.E.L.A. ... 391
Program of Cleveland League Involves $60,000 ... 243
†Progress, Elec., Recording A Year of ... 399
*Progress and Develop. of O. H. Transm. Systems—by J. A. Koonts ... 444
Progress Co. Files Suit for Water Rights 464
Progress Made in Lighting During 1922 4
Progress of Industry Celebrated by L. A. Club ... 115
Progress Toward Inductive Co-ordination—by J. E. Woodbridge ... 419
Projects, Western Hydroelec., Under Way in 1922 or Scheduled for 1923 ... 97
Promotional Engineering Work Explained to Engineers, Salt Lake ... 391
†Proposed Classification of Fires Meets with Underwriters' Approval ... 165
†Proposed Engineering License Bill is Live Issue in California ... 202
†Prosperity, Community, Determines Success of the Pub. Util. ... 316
*Proving the Margin of Safety for Western Transmission Lines ... 48
*Proving the Utility of the Modern Elec. Range ... 498
†Public, Pleasing the ... 125
*Public Officials are Guests of Elec. Club Members ... 70
†Public Opinion is the Governing Force in Public Utility Affairs ... 240
†Public Ownership—Political Ownership Differs From ... 126
Public Ownership Candidate is Elected Denver Mayor ... 467
Public Ownership Clouds Overhang Denver Utilities ... 167
†Public Regulation, Consumer-Ownership, Priv. Initiative, Spell Service ... 278
Public Relations, Better, Urged at New Mexico Convention ... 193
†Public Relations, Fostering by Inspection Tours ... 354
†Public Understands Problems of Util. Better ... 479
†Public Utilities, Uniform Classification of Accounts ... 126
†Public Utilities, Wash., Face State Ownership Problem ... 203
†Public Util. Advertising—To What Extent ... 478
Public Util. Advertising, Urged by Denver Man ... 344
Public Utilities Comm., Utah—
Approves Contract, Utah Power Co. 229
Dismisses Application of Cedar City ... 269
New Member ... 268
†Public Utiltiy, Success of, Community Prosperity Determines ... 316
†Public Utility Affairs, Public Opinion Governing Force ... 240
†Public Utility Field, Goodwill Adventures Needed ... 3
†Public Util. Problems—Public Understands Better ... 479
Public Wealth and Power Earnings, Comparative—by G. B. Herington ... 215
Pueblo, Colo.—
*Baking Contest ... 499
*Dream Bungalow ... 300
Puget Sound Power & Light Co.—
Customer Ownership Campaign Started ... 305
Plans Erect. of Conn. Line ... 464
Plans Extensions ... 268
Power Line Over 2 Mtn. Ranges ... 303
Purchases 9 Wash. Utility Plants ... 66
Purchases No. Coast Power Co. ... 152
Securities Co. Discussed ... 267
Transm. Line Work Progressing ... 66
*Pull the Casual Window Shopper Into the Store ... 463
Pumping Units Ordered for Denver Water Supply ... 342
†Puncturing the Excessive Cost Bubble in Elec. Home Operation ... 317

Page

*Purchasing and Storing—Standardization Recommended—by C. A. Kelley ... 438
*Putting the Snows of Mt. Hood to Work—by Lewis A. McArthur ... 483

Q

Qualifications for Railroad Commissioners Explained by Fresno Engineer—by B. F. Jakobsen ... 129
†Quality Installations, Educate Home Builder to Demand ... 126
Quarterly Meeting, Pac. Div. Elec. Sup. Job. Assn., Del Monte ... 115

R

Radio—
*A Sales Aid to the Electrical Merchant—by F. W. Christian ... 65
Advertised by Salem Elec. Co., Newspaper and Theater ... 262
Broadcasting, Future Now Assured ... 281
†Carrier Current Demonstration of Interest to Power Cos. ... 164
Matinees, Denver, Advance Elec. Idea 306
Matinees Resumed by Denver League 468
Plant, Gov., May be Installed at Salt Lake ... 386
*Reopens Communication After Storm 128
Radio and Electrical Exposition Planned, S. F. ... 228
Radio and Elec. Firms Ready for Exposition, S. F. ... 265
Radio and Elec. Show—
Committees Appointed, S. F. ... 228
*Held in S. F. ... 384
San Francisco ... 114
*Radio and the Electrical Dealer—by David Sarnoff ... 486
†Radio Chamber of Commerce, Natl., Reorganization is Effected ... 127
*Radio Corp. Officials Visit Pac. Coast ... 266
†Radio Corporation President Optimistic as to Future of Industry ... 241
Radio Situation—N.E.L.A. To Study Central Station ... 5
*Radio Week—Elec. Co. Conducts, San Diego ... 61
*Rail Bases are Destroyed Through Electrolytic Action ... 217
Railroad, New, Would Open Nevada Land 356
Railroad, Salt Lake & Utah, Enlargements ... 112
Railroad, Elec., To be Built in Montana Territory ... 190
Railroad Commission, Calif. State (see Calif. State R. R. Comm.).
Railroad Seeks Permit to Build Cutoff 118 Miles Long ... 302
Railroad to Tap Rich Iron Deposits is Authorized, Utah ... 191
Railroads, Utah, Unification Considered ... 265
Railway, Pac. Elec., Orders Elec. Locomotives ... 305
Railway, Street, Gives Order for Converter Equipment ... 464
Railway, Virginian, Lets Electrification Contract ... 389
Railway Merger, British Set Example ... 167
Railroad Taxes Treble in 10 Years ... 166
*Range, Elec., Proving the Util. of ... 498
Range Installations Served by New Distribution Line, Selma ... 115
*Ranges, Elec., Merchandising—by A. H. Nicoll and Herbert Cram ... 403
Rate Base, New, Given P. G. & E. by Railroad Commission ... 68
Rate Increase Granted Munic. Plant, Fairview, Utah ... 113
Rate Reduction Offer Made by Pwr. Co., Montana ... 506
Rate Regulations are Changed by Utah Municipal Plant ... 110
Rate Schedule Filed, New, Washington ... 28
Rate Schedule of Great Western Power Revised ... 70
Rate Schedules, Analysis—by E. B. Criddle ... 448
Rates, Kamas, Utah, Complains of ... 386
Rates, Light, Seattle Plans Reductions ... 340
Rates Reduced, Light and Power, Seattle 467
Raymond, Wash., Silver Mill Co. Orders Elec. Material ... 189
*Reaching for the Appliance Customer's Pocket Book ... 339
*Recent Develop. of A. C. Substations—by R. C. Powell ... 442
Recent Safety Rule Developments—by R. R. Cowles ... 488
Reclamation Conference is Held at Salt Lake City ... 151
Record for Homes Wired for Elec., Johnstown, Colo. ... 343
*Record Submarine Power Cable Laid in San Francisco Bay ... 67
†Recording a Year of Electl. Progress ... 399
Redlands Electric Light & Power Co.—Thirtieth Annivers. ... 82
*Reduction Furnace Iron, Electric, for a Steel Making Base—by R. C. Gosrow ... 16

Page

Reduction Made in Lighting and Power Rates in Seattle ... 467
Reed Power Sale Bill—
Amended ... 227
Passed by Wash. Legis. ... 264,342
Reflections from N.E.L.A. Denver Meeting ... 154
Refrigeration, Domestic, Study of—by H. C. Rice ... 418
Registration, N.E.L.A. Meeting, Denver ... 154
†Regulating Bodies, Engineering Quadifications for ... 2
†Regulation, Sound—Destructive Competition vs. ... 278
†Regulation Held to be Only Bulwark Between Individual Enterprise and Socialism ... 80
Rehearing for Increasing Rates, Gt. West. Power Co. ... 153
Relay Sub-Committee, Report—by E. R. Stauffacher ... 429
Removal Notice, Novel, Chicago ... 262
†Reorganization of National Radio Chamber of Commerce is Effected ... 127
Repeat Orders, Develop. Business that Will Bring—by H. E. Chatfield ... 296
Report Discourages Erection of Municipal Water Plant ... 465
Report of the Relay Sub-Committee—by E. R. Stauffacher ... 429
Report on Washington Utilities ... 231
Reports (See Convention Papers).
†Reports, Annual, of Power Cos. Designed for Consumer Owners ... 356
Reports for Convention Will be Selected at Meeting, Pac. Coast Elec. Assn. ... 229
Representatives of Underwriters Address Oakland Club ... 307
Republic Fin. & Inv. Co. to Handle Western Business ... 303
Requests for Power Permits are Indefinitely Suspended ... 114
Residence Lighting, Business Possibilities —by R. S. Prussia ... 409
Restaurant Installs Individual Elec. Toasters, Rossland, B. C. ... 185
Retail Stores, Lighting—by R. S. Prussia ... 410
Richards & Geier Booklets Prepared ... 303
Rivers, Calif., Subject of Pwr. Bd. Survey ... 507
Rocky Mountain Committee on Pub. Util. —Information Enlarges Activities ... 26
Rocky Mountain Elec. Coop. League—
Black, Miss Helen, Cooking Elec. ... 190
Chase, S. A., Guest ... 155
*Convention, Salt Lake—by M. L. Cummings, Jr. ... 343
Elects New Officers ... 71
Moves Offices ... 193
*Rome Plant, Nev. Power Co., 1896 ... 84
Rossland, B. C., Restaurant Installs Indiv. Elec. Toasters ... 185
Rules, Line Extension, Made in State of Washington ... 110
Rules Governing Utility Accounts Are Changed ... 4
Rural Customers, Utah P. & L. Co. Adding ... 268
†Rural Stretches Challenge Elec. Indus. ... 479
Ryan, Harris J., Officially Named President of A.I.E.E. ... 466

S

Sacramento, Calif.—
Considering Munic. Hydroelec. Plant 230
Contractor-Dealers Meet ... 71
*Dealer Distributes Thermometer to Customers ... 262
Develop. of Elec. Power Planned ... 266
Elec. Men Form Coop. League ... 31
Safety Code on Walkway Surfaces to be Asked of Amer. Eng. Std. Comm. ... 191
Safety Rule Developments, Recent—by R. R. Cowles ... 488
Sale Measure, Municipal Power, Before State Law Makers ... 150
Sale of Power, Pac. Gas & E. Co. to Sierra Pacific Elec. Co. ... 387
Salem Electric Co., Newspaper and Theater Advertise Radio ... 262
Sales, Power, Show Marked Increase ... 357
*Sales Aid to Elec. Merchant, Radio—by F. W. Christian ... 65
*Sales Increased 27 per cent by Window Displays—by John W. Otterson ... 136
Sales Letter, Weekly, Increasing Man-Power Urged in ... 149
†Salesman, Satisfied User is Best ... 479
Salesmen, Elec., One-Act Play Gives Advice to ... 225
Salt Lake & Utah R. R. Enlargements ... 112
Salt Lake City, Utah—
All Engineers' Club Meeting ... 391
Chase, S. A., Guest of Elec. Men ... 155
Engineering Council Election ... 226
Engineers Establish Headquarters ... 113
Engrs. Hold Interesting Wk. Meetings ... 345
Gov. Radio Plant May be Install ... 386
Highway Light. Demonstration ... 341
Mining Expos. Planned ... 267
Offered Rights of Great Basin Co. ... 231
R. R. to Tap Iron Deposits ... 191
Reclamation Conference ... 151
Unification of R.Rs. Considered ... 265
Salt Lake Pressed Brick Co. Contract with Power Co. Approved by Pub. Util. Comm. ... 229
San Diego, Calif.—
*Bakery, Elec., Marine Corps ... 58
Elec. Club Committees Appointed ... 231
Elec. Club Hears H. A. Adams ... 230
*Radio Week by Elec. Co. ... 61
San Diego Electric Club—
*Elects New Officers ... 193
Makes Plans for Home Display ... 269
San Francisco, Calif.—
Accepts Bids for Transm. Line Wire, Moccasin Crk. ... 110
Assn. for Blind to Raise Funds ... 503
*Cable Laid in Bay ... 67
Combined Radio and Elec. Show ... 114
Elec. Dev. League Election Meet ... 155
Elec. Home Opened ... 380
Ferryboat Launched on Bay ... 152
Jobbing Firms Consolidate ... 342
Market Terminal Plans ... 229
*Men Guests on Turbo-Elec. Ferry ... 507
Pac. Coast Elec. Assn. Convention Scheduled ... 115
Program for P.C.E.A. Convention ... 504
*Radio and Elec. Show Held ... 384
Radio Exposition Ready ... 265
*Second Elec. Home Displayed ... 496
Supervisors Halt Wire Approp. ... 188
Supply Co. Prepares for Expansion ... 69
*Truck, Elec., Parade to be Held ... 505
San Francisco Elec. Develop. League—
*Christmas Party ... 29
Committees Appointed ... 269
Committees Appointed for Radio Show ... 228
Elec. Heat Discussed ... 345
*Guests on Turbo-Elec. Ferry ... 507
*Play Presented, Contrs. Day ... 20
To Hold Elec. Truck Day ... 469
San Francisco-Oakland Terminal Rys.—Street Cars Ordered ... 67
San Gorgonia Power Co. Given Permission for Power Houses ... 111
San Joaquin Light & Power Corp.—
Bids on Bldg. Accepted ... 153
*Crane Valley System ... 130
Elec. Ranges Served by New Line, Selma ... 115
Kings River Project Started ... 113
*Midway Plant ... 282
*Midway Plant—by E. A. Quinn ... 288
Power Application Suspended ... 114
†Report Designed for Consumer Owners ... 355
To Enlarge Crane Valley Pwr. Hse. ... 114
*Transmission Towers ... 48
*Santa Rosa Road Lighting Installation ... 55
†Satisfied User Is Best Salesman, A ... 479
Saving Plan, Gen'l Elec. Employees ... 266
Sawmill Buys Synchronous Condensers, Shevlin-Hixon ... 67
School, Indus. Heating, Boston ... 340
*School, Ogden, Installs Elec. Appliances 69
*Schools, Calif., Use of Elec. Taught ... 337
†Schools, Plan Better Lighting in ... 317
Seattle, Wash.—
A.I.E.E. Elects Officers ... 506
Advertising Campaign Municip. Owned Utilities ... 466
Apt. Has Elec. Install ... 263
†Bill Would Permit Cities to Operate Beyond Munic. Limits ... 80
*Elec. Club Holds Dinner Dance ... 388
Municipal Ry. Returns to 5c Fare ... 229
NePage-McKenny Co. Will Build Transmission Line ... 343
NW. L. & P. Ass'n Convention, June ... 193
Olympic Hotel Archts Drawings ... 268
Plans Better Street Lighting ... 342
Plans Reductions in Rates ... 340
Rates Reduced, Light & Power ... 467
Skagit River Progress ... 467
*Wash. Iron Wks. Construction ... 228
Will Build 100-Mi. Transm. Line ... 226
Seattle Co. Plans Erection of Conn. Line 464
Second Annual Electrical Party Held by Denver League ... 71
Second Conference Conducted by Columbia Basin League ... 386
*Second Elec. Ferry Launched on S.F. Bay 152
*Second S.F. Electric Home Is Displayed ... 496
Secretary of the Interior Authorizes Purchase of Elec. Shovels, McKay Dam ... 390
Securing Plans for Elec. Homes in Japan 454
†Securities, Customer-Ownership Prizes for Best Paper on ... 279
Securities Co. Discussed by Wash. Men ... 267
*Sell the Electrical Product to the Industry First—by J. E. Bullard ... 144
*Sell the Woman Buyer the Goods—Not the Price—by Prudence Penny ... 64
*Selling, Cooperative—by J. E. Bullard ... 56
*Selling Elec. Appliances, New Angle of Approach—by J. E. Bullard ... 292
*Selling Elec. Outlets to the Home Builder—by D. E. Harris ... 105
*Selling Service with Heavy Electrical Appliances ... 24
Selling the Cooperative Organization to the Trade ... 182
Selling the Elec. Idea to Power Co. Employees ... 297
†Service, A—For Sale ... 277
†Service, Consumer-Ownership, Priv. Initiative and Pub. Regulation ... 278
*Service, Selling with Heavy Elec. Appliances ... 24
*Service for the Elec. Contr. A—Announcement ... 331
Service Resumed by Calif. Co. After Fire 111
Service to be Given Calif. Towns by Pwr. Line, S. L. Obispo ... 30
*Seventy-five Thousandth Meter Installed in Denver ... 113
*Shallow Show Window — Installing the Display ... 497
Shevlin-Hixon Lumber Co. Buys Synchronous Condenser ... 67
Shorey Light & Power Co. Files Articles of Incorporation ... 70
Show, Elec. and Radio Combined, S.F. ... 114
*Show, Radio and Elec., Held, S.F. ... 384
*Show Window, Shallow — Installing the Display ... 497
Show Window Lighting—
†Electrical Merchant's Day to Promote Value of Better—by Clark Baker ... 411
†Show Windows—Making Them Ring the Cash Register ... 127
†Sibley, Robert, Becomes Executive Manager, Calif. Alumni Ass'n ... 2
Sierra Electric Co. to Buy Power from Pacific Gas & Elec. Co. ... 387
Sign, Elec., Donated to Astoria ... 231
Signs, Elec. and Billboard Illumination—by Paul D. Howse and Tracy Simpson 407
Silver Creek Project—Sacramento Considering Municip. Hydroelec. Plant ... 230
Silver Mill Co. Orders Elec. Material ... 189
Single-Phase Transformers for Eagle Rock Completed ... 303
Six Applicants Request Water for Power Develop. ... 302
*Six Thousand People Visit Dream Bungalow in Pueblo ... 300
Skagit River Progress Satisfactory ... 467
Small Electric Furnaces Tested in Colo. 27
*Small Sized City and the Elec. Home ... 148
Snake River—
Districts Join New Irrigation Project, Five ... 190
Generating Plant Will Increase Capacity ... 153
Survey Shows Pwr. Resources ... 280
*Snow on Transmission Lines, Western Colo. Power Co. ... 179
*Snows of Mt. Hood—Putting to Work—by Lewis A. McArthur ... 483
†Socialism and Individual Enterprise — Regulation Only Bulwark ... 80
Society for Electrical Development—
†Classification of Fires Meets with Underwriters' Approval ... 165
Coop. Effort in Educating Community 220
Coop. with Archts. Suggested ... 188
New Pamphlets to be Issued ... 190
Some Snappy New Year Resolutions—by Joe Osier ... 23
Some Western Hydro Projects Under Way in 1922 or Scheduled for 1923 ... 97
Southern California Edison Company—
†Another Milestone Passed ... 353
*Awarded Coffin Medal ... 503
*Begin Oper. World's Record High Voltage Power Line ... 387
*Big Creek No. 1 Compared with Rome Plant ... 84
*Cable for Big Creek No. 3 ... 28
*Communication Bldg., Cascada ... 358
Eagle Rk. Service Resumed ... 111
Edison Partners—First Issue ... 342
Elec. Club Celebrates 30th Anniversa. of Redlands Co. Hydro Plant ... 82
Fire Damages Substation ... 66
Laguna-Bell Station Starts Construction Program ... 112
*More Than a Million Hp. — by Geo. C. Tenney ... 245
Petition for Transm. Line License Filed ... 229
Prelim. Power Permit Granted ... 114
To Add 30,000 Homes in 1923 ... 340
To Install Substation, Long Beach ... 114
Transformer Order Placed ... 265
Transformers Completed ... 303
Transformers Ordered ... 192
*Unnamed Falls Potential Sources ... 244
†West Leads Again, The ... 477
†Westward the Course of Empire Takes Its Way ... 239
Work Progressing on Big Creek No. 3 ... 341
*Southern Electrical Co. Makes it Easy for Prospects to Become Customers ... 298
Southwestern Electrical & Gas Assn. Name Changed ... 115
Southwestern Public Service Assn., New Name of S. W. Elec. & Gas Assn. ... 115
*Spanish Type Elec. Home, El Paso ... 222

Page

Spokane, Wash.—
Line Extension Rules, New ... 110
Square D. Co.—New Conven. Outlet ... 225
Standard Gas & Elec. Co. Growth Shown By Byllesby Booklet ... 389
*Standardization of Practices Recommended by Purchasing and Storing—by C. A. Kelley ... 438
*Standardized Entrance Switches ... 492
†Standards Committee, Amer. Eng., Plans to Standardize Symbols, Etc ... 241
*Star-Journal Cooking School, Pueblo ... 499
*Stave Falls Plant Work Progressing, B. C. Elec. Ry ... 189
Steam-Electric Plant, Hendrie & Bolthoff, Nearing Completion ... 111
*Steam-Elec. Plant Started, Ore ... 265
Steam-Elec. Plant Will Serve Denver ... 110
Steam Plant Equipment for Japan ... 281
*Steam Plant Oper., Problems—by E. A. Quinn ... 370
Steel Plant Given Add. Train Service ... 303
*Steel Tower Sections are Joined by Elec. Welding Outfit ... 19
Stevens Co. Power & Lt. Co. Plans Extensions ... 469
*Sticker, Elec., Making Most Productive ... 260
*Stimulate the Demand for Ornamental Street Lamp Installations ... 177
Store, Elec., of Idaho Power Co. in New Location ... 389
Stores, Retail, Lighting—by R. S. Prussia ... 410
*Storing, Purchasing and—Standardization Recommended—by C. A. Kelley ... 438
*Street Car Parts, Autom. Control for Compressor Made from ... 256
*Street Lamp Installations, Ornamental, Stimulate Demand for ... 177
Street Lighting—
Bureau Plans Study ... 166
†Improvement Shown ... 165
Seattle Plans Better ... 342
Street Lighting System, Chandler, Contemplated ... 230
Street Lighting System, Idaho Falls, Improved ... 181
*Street Lighting System Celebrated, Denver ... 68
Street Railway Gives Order for Converter Equipment ... 464
Study of Domestic Refrigeration, A—by H. C. Rice ... 418
*Submarine Power Cable is Laid Across Willamette River ... 467
*Submarine Power Cable Laid in S. F. Bay 67
Substation—
Laguna-Bell, Starts Cons. Program ... 112
To be Erected, Pasadena ... 111
To be Installed at Long Beach ... 114
Vancouver, Wash., New ... 228
Visited by Utah Elec. Engrs ... 507
*Substations, A. C., Developments—by R. C. Powell ... 442
Subway Planned, Pacific Elec., L. A. ... 302
Success Not a Chance—Lucky Stiffs Barred—by Joe Osier ... 462
*Successful Gasoline-Elec. Car is Designed for Swiss Railroad ... 17
*Suggestions Used to Sell Elec. Fans, Denver ... 500
Suit to Secure Return of Water Right Opened by Co ... 464
Superpower Survey, Natl., Subject of Book ... 503
Superpower Survey of the Pac. N. W., ... 316, *321
*Superpower Zone, Pacific Coast ... 98
†Supreme Court Decision of Great Importance to Power Progress ... 400
Survey, Natl. Superpower, Subject of Book ... 503
*Survey, Superpower, of Pac. N. W. ... 321
Survey Shows Power Resources of Snake River ... 280
Survey to be Made, Douglas, Ore ... 345
†Swampscott—Convention A.I.E.E. ... 317
*Swiss Railroad, Successful Gasoline-Elec. Car Designed for ... 17
*Switch Boxes, Order Blank Aid to Contr. 262
*Switchboard Equip. from Stock St. Car Parts ... 256
*Switches, Standardized Entrance ... 492
Swope, Gerald P., Visits West ... 390

T

Tacoma, Wash.—
*Elec. Club Holds Dinner Dance ... 388
*Light Officials Take Snowshoe Trip ... 341
Takes Issue with Communication on Subject of Heat. Homes by Elec.—by W. F. Burrell ... 243
Tanker, Elec. Driven, Given Trial ... 304
†Tariff Act—Manufacturers Are Accorded New Rights Under Current ... 80
Tax Bill Proposed on Receipts of Utilities, Montana ... 188
Taxes, Railroad, Treble in 10 Years ... 166
*Teaching the Housewife to Cook Electrically—by Ray W. Trumbull ... 171
Technical Sales Problems to be Handled by Engineer ... 344

Page

*Temperature, Oil, of Distribution Transformers—Effects of Colored Cases—by Moore and Moulton ... 433
Ten Years' Hydro Progress in Utah ... 128
Testing and Maintenance of Elec. Meters—by W. H. Talbott ... 446
Testing Laboratory, Underwriters, to Open in West ... 226
*Theater, Grauman's Metropolitan—by George C. Tenney ... 131
*Thermometer, Dealer Distributes ... 262
Thirty Years of Hydro Progress ... 82
*Thirty-four Years of Hydroelec. Development in the West—by N. S. Gallison ... 91
*Thirty-seven Million Dollar Market in the West, A ... 93
Thompson, E. A., Announces Record for Wired Homes, Johnstown, Colo ... 343
Three Electrically Driven Boats are Given Trials ... 304
*Three Phase vs. Single Phase Transformers for Distrib. Power Service—by E. Y. Porter ... 455
To Construct Transmission Line in Montana in Spring ... 151
To Rebuild Transmission Lines in No. Calif. ... 305
†To What Extent Shall the Public Utilities Advertise? ... 478
†Toast Your Breakfast Food—Campaign of Bakers Assn ... 400
Toasters, Elec., Installed in Restaurant, Rossland, B. C ... 185
Tourist Camps, Colo., Will be Elec. Lighted ... 343
*Tower Sections, Steel, Joined by Electric Welding Outfit ... 19
Trade Outlook ... 35, 75, 119, 159, 197, 235, 273, 311, 349, 396, 473, 511
Transformer, Large, Order Placed by Calif. Co ... 265
Transformer Designed to Prevent Fire and Explosion ... 67
Transformers—
Eagle Rock Completed ... 303
Installed by Idaho Power Co ... 68
So. Cal. Ed. Co. Orders ... 192
*Transformers, Distrib., Effects of Colored Cases on Oil Temp.—by Moore and Moulton ... 433
Transformers, Power, Observations on Operation—by G. M. Wills ... 425
*Transformers for Distrib. Service—3-phase vs. Single-ph.—by E. Y. Porter ... 455
Transmission Line to Project on Kings River Started ... 113
Transmission Line Wire Bids Accepted by S. F. ... 110
Transmission Lines—
Anchorage, Alaska ... 30
Authorized by Modesto Directors ... 305
B. C. Elec. Ry. Construction ... 66
B. C. Elec. Ry. Lets Contract ... 306
*B. C. Elec. Ry. Co. Starts Develop ... 189
Beaverhead Transm. Co ... 303
California Oregon Power Co ... 386
Construction Work, Montana ... 151
Equip. Purchase Halted, Hetch Hetchy 188
Florence Elec. Co. Plans ... 268
Idaho Power Co. Applies for Permit ... 114
Lease Signed, Modesto-Turlock ... 189
Midland Counties Corp. Completes ... 30
Modesto Irrig. Dist. to Open Bids ... 302
Montana Power Co. Extends to Dillon 30
Nevada Power Co. Application for ... 152
Northwestern Elec. Will Build ... 342
Oregon Power Cos. Interconnection 26
Over Two Mountain Ranges, N. W. ... 303
*Pacific Coast Superpower Zone ... 98
P. G. & E. Over Sierra Nevadas ... 228
Petitions Filed with Fed. Pwr. Comm., California ... 229
*Proving Margin of Safety ... 48
Puget Sound P. & L. Co ... 66
Puget Sd. P. & L. Co. Plans ... 464
Right of Way Contract Awarded, B. C. Elec. Ry. Co ... 388
Seattle, NePage-McKenny Co. Will Build ... 343
Seattle Will Build 100-Mi ... 226
*So. Cal. Ed. Begin Oper. World's Record ... 387
Stevens Co. P. & L. Co. Plans ... 469
To Rebuild in No. Calif ... 305
Wash. Water Power Co. to Quincy ... 188
Wash. Water Power Co. to Quincy ... 269
*Western Colo. Power Co ... 179
Transmission of Power Started by Turlock District ... 305
*Transmission Systems, O. H., Develop.—by J. A. Koontz ... 444
*Trial, Mock, Reveals Advantages of Elec. Washer ... 221
Transportation Club., Elec., S. F., to Hold Elec. Truck Day ... 469
†Trite But True, It Pays to Advertise ... 316
Truck Day, Elec., To be Held by S. F. League ... 469
*Truck Parade, Elec., in San Francisco ... 505
*Truck Used for Portable Window Display 501
Truckee River Electric Company—Trans. Line over Sierra Nevadas ... 228

Page

*Trucks, Elec., Opportunities for Cent. Sta. in—by Frost and Sandoval ... 420
Truman, A. M., Huntington, Utah, Applies for Water Diversion Permit ... 388
Turbine, Pelton, Ordered by Wash. Pwr. Co ... 388
Turbines Ordered for Mystic Lake Plant 502
*Turbo-Elec. Ferry on S. F. Bay ... 507
Turlock Irrig. District Power Hse. in Service ... 305
*Twenty-five Year Service Button Given John B. Miller ... 153
Twenty-five-year Service Men Are Honored at Banquet ... 151
Twin Falls, Idaho—Election on Snake River Irrig. Project ... 28
Two Applications Are Filed for Wash. Water Rights ... 304
*Two Calif. Elec. Homes Are Displayed ... 380
Two S. F. Jobbing Firms Effect Consolidation ... 342

U

Umatilla Rapids—Investigation Celebrated ... 306
U. S. Bureau of Mines—Petroleum Products Spec. Given ... 192
U. S. Circuit Court Denies L. A. Rehearing in Condemnation Proceedings ... 192
U. S. Civil Service Competitive Exams ... 191
U. S. Forest Service—
†Cooperates with U. S. G. S. on Document on Power Systems ... 478
U. S. Geological Survey—
†Issues Document on Calif. Power Systems ... 478
U. S. Reclamation Service—
Authorizes Purchase of Elec. Shovels, McKay Dam ... 390
Klamath Falls, Ore., Canals for Sale 226
U. S. Vessels, Modern Elec. Equip. on ... 45
Uncle Sam as an Aid to the Elec. Lamp Dealer ... 107
Underground Systems, Install. and Oper. by E. R. Northmore ... 426
†Underwriters Laboratory to be Established on Pacific Coast ... 202
Underwriters Will Open Test. Laboratory in West ... 226
Unification of Utah R. Rs. to be Considered ... 265
Uniform Classification of Accounts—by C. P. Staal ... 432
†Uniform Classification of Accounts for Elec. Public Utilities ... 126
Universities in Colorado Teach Utility Subjects ... 44
University of California—
Engineers' Day ... 193
*Unnamed Falls Potential Sources of Energy ... 244
*Use of Electricity Taught in Calif. Schools ... 337
†User, Satisfied, is Best Salesman ... 479
Utah—
Bill to Abolish Pub. Util. Comm. Rejected ... 190
Builders Exchange Formed to Promote Bldg ... 306
Edison Lamp Wks. Advertising Described ... 391
Elec. Engineers Visit Substation ... 507
Engineers Will Establish Permanent Headquarters ... 113
Flood Control Scheme Presented ... 112
Local Utilities to be Taxed by Counties ... 68
Highway Light, Demonstration ... 341
Minding Co. to Double Capacity of Lead Mill ... 188
New Member Appointed to Util. Comm. ... 268
Ogden and Salt Lake City Offered Rights of Great Basin Co ... 231
Parowan City Plans Develop. of Power ... 111
Permit Sought for Power Dev. Project ... 30
Rate Increase Granted Fairview Plant ... 113
Rate Regulations Change by Municp. Plant ... 110
Ten Years Hydro Progress ... 128
Util. Comm. Dismisses Cedar City Application ... 269
Utah-Apex Min. Co. to Double Capac. of Mill ... 188
Utah Power & Light Co.—
A.I.E.E. Visits Substation ... 507
Adding Rural Customers ... 268
Attacks Pub. Util. Law ... 29
Consumers to Pay Standard Rates ... 29
Contract Approved by Pub. Util. Comm., Salt Lake P. Brick Co ... 229
Goshen, Utah, Closes Contract ... 188
Utah R. Rs. Unification to be Considered 265
Utilities, Pub. & Priv., Report by Wash. State Dept. of Public Works ... 231
Utilities Comm., Utah, New Member ... 268
Utilities in California are Expanding ... 83

Page
Utilities Men, Wash., Discuss Securities Co. ... 267
Utilities May be Taxed on Receipts, Montana ... 188
Utility Accounts, Rules Are Changed ... 4
Utility Comm. Funds Threatened ... 480
*Utility Information Committee Formed in Washington ... 151
Utility Plants Purchased by Puget Sound Co., Wash. ... 66
*Utility of Heavy Appliances, Demonstration Shows ... 108
Utility Uses Directed Wireless for Dispatching, P. G. & E. ... 319

V

Vacuum Cleaner Retailer Has Novel Removal Notice ... 262
†Valuable Document Issued on Calif. Hydroelec. Power Systems ... 478
Value of Better Show Window Lighting —by Clark Baker ... 411
Valve Patent Suit Decision, Johnson ... 304
Vancouver, Wash.—New Substation ... 228
Van Kuran, K. E., Arranging for Transportation to N.E.L.A. Convention ... 307
*Vehicles, Elec., Opportunities for Central Sta. in—by Frost and Sandoval ... 420
Volumes, Bound, of Journal of Electricity Available ... 68
Voluntary Rate Reduction Offer Made by Power Co., Montana ... 506

W

*Warehouse, Calif. Wire Co. Opens, S.F. 466
*Washer, Elec., Mock Trial Reveals Advantages ... 221
Washing Machines—
*Dept. Store Methods for Merchandising—"Washer" Wilson ... 31
*Small, Window Display, Marsh Elec. Co. ... 225
Washington—
†Bill Would Permit Cities to Operate Beyond Municip. Limits ... 80
Committee on Pub. Util. Information Organized ... 151
Legislature Passes Reed Power Sale Bill ... 264, 342
Power Line is to be Extended to Orchard District ... 269
Rate Schedule Filed ... 28
State Dept. of Pub. Works Reports on Utilities ... 231
†Utilities Face State Ownership Problem ... 203

Page
Utilities Men Discuss Securities Co... 267
Water Rights, Applications Filed ... 304
Washington, D. C., Events ... 112
Washington Iron Works—
*Plant Construction ... 228
Washington Water Power Co.—
Executives Visit Extensions ... 466
Extension Rulings ... 110
Kettle Falls Plant Cons. to Start ... 227
Orders Large Pelton Turbine ... 388
Orders New Equipment ... 112
To Erect Power Line to Quincy ... 188
To Extend to Orchard District ... 269
Water and Air Heating—Analysis of Data—by J. W. Wrenn ... 413
Water and Light Dept., Casa Grande, Install Diesel Engine ... 303
†Water and Power Act—Happy New Year 1
Water Commissioners, Denver, Order Order Pump. Units ... 342
Water Division Report Reveals Interesting Data ... 356
Water for Power, Ore. Men Apply for ... 388
Water Plant, Municipal, Report Discourages, Logan, Utah ... 465
†Water Power—Another Milestone Passed 353
Water Right—Suit to Secure Return Opened, Progress Co. ... 464
Water Rights, Calif., Demand Heavy ... 230
Water Rights in Shasta County Sold, Lumber Co. ... 230
Water Wheel Bids Opened, Eugene, Ore. 150
*Welding, Elec., Steel Tower Sections Joined by ... 19
Wenatchee, Wash.—Elec. Club Organized 345
West, Hydroelec. Develop. Program, Involves 185,500 Kw., 1923 ... 96
West Begins, Where the—by Joe Osier ... 149
West Kootenay Pwr. & Lt. Co. to Dbl. Capacity, Bonnington Falls ... 264
†West Leads Again, The ... 477
*Western Colorado Power Co.—Sleet on Transm. Lines ... 179
†Western Hydroelec. Plants — Chronological Tabulation ... 81
Western Hydroelec. Projects Under Way in 1922 or Scheduled for 1923 ... 97
Western Market, $37,000,000 ... 93
Western States Gas & Elec. Co. Permitted to Transfer Properties ... 67
Weestinghouse Elec. & Mfg. Co.—
Eagle Rock Transformers Completed 303
Offers Merchandising Aid ... 25
†Westward the Course of Empire Takes its Way ... 239
Where the West Begins—by Joe Osier ... 149
*While There's Credit There's Hope—by L. R. Ardouin ... 20

Page
†White Collar Job, Lure of ... 202
Will Erect Modern Wood Testing Plant in Oregon Town ... 27
Will Increase Capacity of Snake River Generating Plant ... 153
Will Start Work on Mystic Lake Hydro Plant Immediately ... 191
Willapa Lumber Co. Electrifies Plant ... 342
*Williams Institute Elec. Heated ... 301
Willits, Calif.—
Power Co. Petitions to Supply Power 69
Willits Water & Power Co. Acquires and Sells Elec. and Water Properties ... 231
Window—Installing Display in Shallow ... 497
Window Display—
*Elec. Light Bulb for ... 297
*Marsh Elec. Co. ... 225
*Portable, Arousing Interest ... 501
Portable, Before L. A. Elec. Club ... 231
*Window Displays Increase Sales 27 per cent—by John W. Otterson ... 136
*Window Displays Prepared by Manufacturer ... 62
Window Lighting—
†Elec. Merchants Day to Promote Show ... 43
*Offering the Merchant Better ... 186
Value of Better—by Clark Baker ... 411
Window Shopper—Pull Into the Store ... 463
†Windows, Show, Making Them Ring the Cash Register ... 127
*Windows That Made Sales ... 137
Wired Wireless is Successfully Demonstrated ... 83
Wireless, Wired, is Successfully Demonstrated ... 83
Wireless System of Dispatching, Directed 319
Wiring Homes ... 332, 378, 460, 494
Wiring Rules, Enforcement, Colo. Springs 464
*Woman Buyer, Sell the Goods, not the Price—by Prudence Penny ... 64
Wood Treating Plant in Ore. Town ... 27
*Work on Moccasin Creek Plant Progressing Rapidly ... 227
Work Progressing Rapidly on Big Creek No. 3 ... 341
*World's Record High Voltage Power Line Begins Operating ... 387

Y

Yanking Home the Yen—by Joe Osier ... 221
Year Book Issued by Eng. Standards Committee ... 304

Z

*Zone System Purchase Order Form ... 441